



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: 5/7/2019

Subject: Review of Region 5 Data for R06 Deer Park PFAS

To: Region 6, US EPA
10625 Fallstone Road
Houston, TX 77099

From: Danielle Kleinmaier, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: R06 Deer Park PFAS

Analyses included in this report:

OSRTI PFC

Report Name: 1905002,1905003,1905005 PFC DRAFT May 07 19 1615



Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Accredited Analyses included in this Report



Method: *** DEFAULT SPECIFIC METHOD *** in Water

Analysis: OSRTI PFC

Analyte

Certifications

perfluorobutanoate	ISO/IEC 17025:2005
perfluoropentanoate	ISO/IEC 17025:2005
perfluorohexanoate	ISO/IEC 17025:2005
perfluoroheptanoate	ISO/IEC 17025:2005
perfluorooctanoate	ISO/IEC 17025:2005
perfluorononanoate	ISO/IEC 17025:2005
perfluorodecanoate	ISO/IEC 17025:2005
perfluoroundecanoate	ISO/IEC 17025:2005
perfluorododecanoate	ISO/IEC 17025:2005
perfluorotridecanoate	ISO/IEC 17025:2005
perfluorotetradecanoate	ISO/IEC 17025:2005
perfluorobutyl sulfonate	ISO/IEC 17025:2005
perfluorohexyl sulfonate	ISO/IEC 17025:2005
perfluoroctyl sulfonate	ISO/IEC 17025:2005
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	ISO/IEC 17025:2005
perfluoro-1-pentanesulfonate (PFPeS)	ISO/IEC 17025:2005
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	ISO/IEC 17025:2005
perfluoro-1-heptanesulfonate (PFHpS)	ISO/IEC 17025:2005
perfluoro-1-octanesulfonamide (FOSA)	ISO/IEC 17025:2005
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	ISO/IEC 17025:2005
perfluoro-1-nonanesulfonate (PFNS)	ISO/IEC 17025:2005
N-MeFOSAA	ISO/IEC 17025:2005
N-EtFOSAA	ISO/IEC 17025:2005
perfluoro-1-decanesulfonate (PFDS)	ISO/IEC 17025:2005



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Phone:(312)353-8370 Fax:(312)886-2591

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Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analytes not listed above are not accredited by ANAB.



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002

US EPA Region 5 Chicago Regional Laboratory

Client: Region 6, US EPA
Project: R06 Deer Park PFAS

Project Manager: Angela Ockrassa Davis
Project Number: [none]

Report To:

Matthew Loesel
Region 6, US EPA 10625 Fallstone Road
 Houston, TX 77099 Phone: (214) 665-9544
 Fax: (281) 983-2248

Date Due: May-30-19 15:00 (30 day TAT)

Received By: Robert Snyder

Date Received: Apr-30-19 09:00

Logged In By: Robert Snyder

Date Logged In: May-01-19 12:42

Samples Received at:	1.7 °C	Work Order Comments:
Sample tags/labels	Yes	Copy/Relog from 1904037.
Seals Intact	Yes	
Received on ice	Yes	
Paperwork Included	Yes	

Sample ID: [1905002-01](#) **Sampled:** [Apr-26-19 08:45](#) **Matrix:** [Water](#)

Sample Name: [ITC-BB-01-20190426-11](#) **Sample Location/Comments:** [BB-01](#)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 08:45	

Sample ID: [1905002-02](#) **Sampled:** [Apr-26-19 11:15](#) **Matrix:** [Water](#)

Sample Name: [ITC-BB-01-20190426-15](#) **Sample Location/Comments:** [Field QC](#)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 11:15	

Sample ID: [1905002-03](#) **Sampled:** [Apr-27-19 09:15](#) **Matrix:** [Water](#)

Sample Name: [ITC-BB-01-20190427-11](#) **Sample Location/Comments:** [BB-01](#)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:15	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905002-04 **Sampled:** Apr-28-19 08:40 **Matrix:** Water**Sample Name:** ITC-BB-01-20190428-11 **Sample Location/Comments:** BB-01**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 08:40	

Sample ID: 1905002-05 **Sampled:** Apr-29-19 08:30 **Matrix:** Water**Sample Name:** ITC-BB-01-20190429-11 **Sample Location/Comments:** BB-01**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 08:30	

Sample ID: 1905002-06 **Sampled:** Apr-26-19 08:55 **Matrix:** Water**Sample Name:** ITC-BB-02-20190426-11 **Sample Location/Comments:** BB-02**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 08:55	

Sample ID: 1905002-07 **Sampled:** Apr-26-19 08:55 **Matrix:** Water**Sample Name:** ITC-BB-02-20190426-12 **Sample Location/Comments:** BB-02**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 08:55	

Sample ID: 1905002-08 **Sampled:** Apr-27-19 09:30 **Matrix:** Water**Sample Name:** ITC-BB-02-20190427-11 **Sample Location/Comments:** BB-02**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:30	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905002-09 **Sampled:** Apr-28-19 08:55 **Matrix:** Water**Sample Name:** ITC-BB-02-20190428-11 **Sample Location/Comments:** BB-02**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 08:55	

Sample ID: 1905002-10 **Sampled:** Apr-29-19 08:40 **Matrix:** Water**Sample Name:** ITC-BB-02-20190429-11 **Sample Location/Comments:** BB-02**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 08:40	

Sample ID: 1905002-11 **Sampled:** Apr-29-19 11:15 **Matrix:** Water**Sample Name:** ITC-BB-02-20190429-15 **Sample Location/Comments:** FieldQC**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 11:15	

Sample ID: 1905002-12 **Sampled:** Apr-26-19 09:10 **Matrix:** Water**Sample Name:** ITC-BB-03-20190426-11 **Sample Location/Comments:** BB-03**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 09:10	

Sample ID: 1905002-13 **Sampled:** Apr-27-19 09:40 **Matrix:** Water**Sample Name:** ITC-BB-03-20190427-11 **Sample Location/Comments:** BB-03**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:40	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** [1905002-14](#) **Sampled:** [Apr-27-19 09:40](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-03-20190427-12](#) **Sample Location/Comments:** [BB-03](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:40	

Sample ID: [1905002-15](#) **Sampled:** [Apr-28-19 09:05](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-03-20190428-11](#) **Sample Location/Comments:** [BB-03](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 09:05	

Sample ID: [1905002-16](#) **Sampled:** [Apr-28-19 11:00](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-03-20190428-15](#) **Sample Location/Comments:** [FieldQC](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 11:00	

Sample ID: [1905002-17](#) **Sampled:** [Apr-29-19 08:50](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-03-20190429-11](#) **Sample Location/Comments:** [BB-03](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 08:50	

Sample ID: [1905002-18](#) **Sampled:** [Apr-26-19 09:25](#) **Matrix:** [Water](#) [*OC Source Sample*](#)**Sample Name:** [ITC-BB-05-20190426-11](#) **Sample Location/Comments:** [BB-05](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 09:25	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** [1905002-19](#) **Sampled:** [Apr-27-19 09:55](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-05-20190427-11](#) **Sample Location/Comments:** [BB-05](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:55	

Sample ID: [1905002-20](#) **Sampled:** [Apr-28-19 09:20](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-05-20190428-11](#) **Sample Location/Comments:** [BB-05](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 09:20	

Sample ID: [1905002-21](#) **Sampled:** [Apr-28-19 09:20](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-05-20190428-12](#) **Sample Location/Comments:** [BB-05](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 09:20	

Sample ID: [1905002-22](#) **Sampled:** [Apr-29-19 09:05](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-05-20190429-11](#) **Sample Location/Comments:** [BB-05](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 09:05	

Sample ID: [1905002-23](#) **Sampled:** [Apr-26-19 10:30](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-07-20190426-11](#) **Sample Location/Comments:** [BB-07](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 10:30	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** [1905002-24](#) **Sampled:** [Apr-27-19 10:30](#) **Matrix:** [Water](#) [*OC Source Sample*](#)**Sample Name:** [ITC-BB-07-20190427-11](#) **Sample Location/Comments:** [BB-07](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 10:30	

Sample ID: [1905002-25](#) **Sampled:** [Apr-28-19 10:25](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-07-20190428-11](#) **Sample Location/Comments:** [BB-07](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 10:25	

Sample ID: [1905002-26](#) **Sampled:** [Apr-29-19 09:50](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-07-20190429-11](#) **Sample Location/Comments:** [BB-07](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 09:50	

Sample ID: [1905002-27](#) **Sampled:** [Apr-29-19 09:50](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-07-20190429-12](#) **Sample Location/Comments:** [BB-07](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 09:50	

Sample ID: [1905002-28](#) **Sampled:** [Apr-26-19 10:05](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-09-20190426-11](#) **Sample Location/Comments:** [BB-09](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 10:05	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905002-29 **Sampled:** Apr-27-19 10:15 **Matrix:** Water**Sample Name:** ITC-BB-09-20190427-11 **Sample Location/Comments:** BB-09**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 10:15	

Sample ID: 1905002-30 **Sampled:** Apr-28-19 09:50 **Matrix:** Water ***OC Source Sample*****Sample Name:** ITC-BB-09-20190428-11 **Sample Location/Comments:** BB-09**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 09:50	

Sample ID: 1905002-31 **Sampled:** Apr-29-19 09:35 **Matrix:** Water**Sample Name:** ITC-BB-09-20190429-11 **Sample Location/Comments:** BB-09**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 09:35	

Sample ID: 1905002-32 **Sampled:** Apr-26-19 09:55 **Matrix:** Water**Sample Name:** ITC-BB-11-20190426-11 **Sample Location/Comments:** BB-11**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 09:55	

Sample ID: 1905002-33 **Sampled:** Apr-27-19 10:05 **Matrix:** Water**Sample Name:** ITC-BB-11-20190427-11 **Sample Location/Comments:** BB-11**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 10:05	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** [1905002-34](#) **Sampled:** [Apr-28-19 09:40](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-11-20190428-11](#) **Sample Location/Comments:** [BB-11](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 09:40	

Sample ID: [1905002-35](#) **Sampled:** [Apr-29-19 09:15](#) **Matrix:** [Water](#) [*OC Source Sample*](#)**Sample Name:** [ITC-BB-11-20190429-11](#) **Sample Location/Comments:** [BB-11](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 09:15	

Sample ID: [1905002-36](#) **Sampled:** [Apr-26-19 08:25](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-12-20190426-11](#) **Sample Location/Comments:** [BB-12](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 08:25	

Sample ID: [1905002-37](#) **Sampled:** [Apr-27-19 08:50](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-12-20190427-11](#) **Sample Location/Comments:** [BB-12](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 08:50	

Sample ID: [1905002-38](#) **Sampled:** [Apr-28-19 08:20](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-12-20190428-11](#) **Sample Location/Comments:** [BB-12](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-26-19 08:20	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** [1905002-39](#) **Sampled:** [Apr-29-19 08:10](#) **Matrix:** [Water](#)**Sample Name:** [ITC-BB-12-20190429-11](#) **Sample Location/Comments:** [BB-12](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-27-19 08:10	

Sample ID: [1905002-40](#) **Sampled:** [Apr-26-19 11:35](#) **Matrix:** [Water](#)**Sample Name:** [ITC-TB-03-20190426-11](#) **Sample Location/Comments:** [TB-03](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 11:35	

Sample ID: [1905002-41](#) **Sampled:** [Apr-27-19 08:50](#) **Matrix:** [Water](#)**Sample Name:** [ITC-TB-03-20190427-11](#) **Sample Location/Comments:** [TB-03](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 08:50	

Sample ID: [1905002-42](#) **Sampled:** [Apr-26-19 11:25](#) **Matrix:** [Water](#)**Sample Name:** [ITC-TB-04-20190426-11](#) **Sample Location/Comments:** [TB-04](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-24-19 11:25	

Sample ID: [1905002-43](#) **Sampled:** [Apr-27-19 09:30](#) **Matrix:** [Water](#)**Sample Name:** [ITC-TB-04-20190427-11](#) **Sample Location/Comments:** [TB-04](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 09:30	

WORK ORDER

Printed: 5/2/2019 10:07:25AM

1905002**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905002-44 **Sampled:** Apr-27-19 08:30 **Matrix:** Water**Sample Name:** ITC-TB-05-20190427-11 **Sample Location/Comments:** TB-05**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-25-19 08:30	

REVIEWED*By Amanda Wroble at 10:07 am, May 02, 2019*

Reviewed By

Date



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 5/2/2019 2:59:07PM

1905005

US EPA Region 5 Chicago Regional Laboratory

Client: Region 6, US EPA
Project: R06 Deer Park PFAS

Project Manager: Angela Ockrassa Davis
Project Number: [none]

Report To:

Matthew Loesel
Region 6, US EPA 10625 Fallstone Road
 Houston, TX 77099 Phone: (214) 665-9544
 Fax: (281) 983-2248

Date Due: Jun-03-19 15:00 (32 day TAT)

Received By: Robert Snyder

Logged In By: Robert Snyder

Date Received: May-02-19 09:15

Date Logged In: May-02-19 14:12

Samples Received at:	0.6 °C	Work Order Comments:
Sample tags/labels	Yes	Copy/Relog from 1905003.
Seals Intact	Yes	
Received on ice	Yes	
Paperwork Included	Yes	

Sample ID: 1905005-01 **Sampled:** May-01-19 08:45 **Matrix:** Water OC Source Sample

Sample Name: ITC-BB-01-20190501-11 **Sample Location/Comments:** BB-01

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 08:45	

Sample ID: 1905005-02 **Sampled:** May-01-19 09:00 **Matrix:** Water

Sample Name: ITC-BB-01-20190501-15 **Sample Location/Comments:** FieldOC

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:00	

Sample ID: 1905005-03 **Sampled:** May-01-19 09:10 **Matrix:** Water

Sample Name: ITC-BB-02-20190501-11 **Sample Location/Comments:** BB-02

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:10	

WORK ORDER

Printed: 5/2/2019 2:59:07PM

1905005**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905005-04 **Sampled:** May-01-19 09:25 **Matrix:** Water**Sample Name:** ITC-BB-03-20190501-11 **Sample Location/Comments:** BB-03**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:25	

Sample ID: 1905005-05 **Sampled:** May-01-19 09:40 **Matrix:** Water**Sample Name:** ITC-BB-05-20190501-11 **Sample Location/Comments:** BB-05**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:40	

Sample ID: 1905005-06 **Sampled:** May-01-19 10:35 **Matrix:** Water**Sample Name:** ITC-BB-07-20190501-11 **Sample Location/Comments:** BB-07**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 10:35	

Sample ID: 1905005-07 **Sampled:** May-01-19 10:15 **Matrix:** Water**Sample Name:** ITC-BB-09-20190501-11 **Sample Location/Comments:** BB-09**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 10:15	

Sample ID: 1905005-08 **Sampled:** May-01-19 09:55 **Matrix:** Water**Sample Name:** ITC-BB-11-20190501-11 **Sample Location/Comments:** BB-11**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:55	

WORK ORDER

Printed: 5/2/2019 2:59:07PM

1905005**US EPA Region 5 Chicago Regional Laboratory****Client:** Region 6, US EPA
Project: R06 Deer Park PFAS**Project Manager:** Angela Ockrassa Davis
Project Number: [none]**Sample ID:** 1905005-09 **Sampled:** May-01-19 09:55 **Matrix:** Water**Sample Name:** ITC-BB-11-20190501-12 **Sample Location/Comments:** BB-11**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 09:55	

Sample ID: 1905005-10 **Sampled:** May-01-19 08:30 **Matrix:** Water**Sample Name:** ITC-BB-12-20190501-11 **Sample Location/Comments:** BB-12**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
OSRTI PFC	28	May-29-19 08:30	

REVIEWED*By Amanda Wroble at 2:59 pm, May 02, 2019*

Reviewed By

Date



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190428-12 (1905002-21)

Matrix: Water

Sampled: Apr-28-19 09:20

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			43.3	ng/L	1	B19E006	May-06-19	May-06-19
perfluoropentanoate	U			43.3	"	"	"	"	"
perfluorohexanoate	36.7			8.66	"	"	"	"	"
perfluoroheptanoate	13.9			8.66	"	"	"	"	"
perfluoroctanoate	8.72			8.66	"	"	"	"	"
perfluorononanoate	U			8.66	"	"	"	"	"
perfluorodecanoate	U			8.66	"	"	"	"	"
perfluoroundecanoate	U			8.66	"	"	"	"	"
perfluorododecanoate	U			8.66	"	"	"	"	"
perfluorotridecanoate	U			8.66	"	"	"	"	"
perfluorotetradecanoate	U			8.66	"	"	"	"	"
perfluorobutyl sulfonate	9.87			8.66	"	"	"	"	"
perfluorohexyl sulfonate	13.5			8.66	"	"	"	"	"
perfluoroctyl sulfonate	43.6			8.66	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.66	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.66	"	"	"	"	"
1H,1H,2H,2H-perfluoroctane sulfonate (6:2 FTS)	413			8.66	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.66	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.66	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.66	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.66	"	"	"	"	"
N-MeFOSAA	U			8.66	"	"	"	"	"
N-EtFOSAA	U			8.66	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.66	"	"	"	"	"
Surrogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	112			95.9%	70-130	"	"	"	"
D3-N-MeFOSAA	110			94.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	96.1			84.9%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	123			111%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	108			98.7%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190428-12 (1905002-21)

Matrix: Water

Sampled: Apr-28-19 09:20

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	112			96.0%	70-130	B19E006	May-06-19	May-06-19	
M8PFOSA	104			89.2%	70-130	"	"	"	
M8PFOS	103			92.1%	70-130	"	"	"	
M8PFOA	121			103%	70-130	"	"	"	
M7PFUnA	102			87.4%	70-130	"	"	"	
M6PFDA	111			94.6%	70-130	"	"	"	
M5PPPeA	132			113%	70-130	"	"	"	
M5PFHxA	127			108%	70-130	"	"	"	
M4PFHpA	120			102%	70-130	"	"	"	
M3PFHxS	110			99.5%	70-130	"	"	"	
M3PBS	128			118%	70-130	"	"	"	
M2PFTreA	8.55	Q		7.30%	70-130	"	"	"	
MPFDaA	84.7			72.4%	70-130	"	"	"	
MPFBA	139			119%	70-130	"	"	"	

ITC-BB-05-20190429-11 (1905002-22)

Matrix: Water

Sampled: Apr-29-19 09:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.9	ng/L	1	B19E006	May-06-19	May-06-19
perfluoropentanoate	U			42.9	"	"	"	"	"
perfluorohexanoate	42.4			8.59	"	"	"	"	"
perfluoroheptanoate	15.3			8.59	"	"	"	"	"
perfluoroctanoate	9.60			8.59	"	"	"	"	"
perfluorononanoate	U			8.59	"	"	"	"	"
perfluorodecanoate	U			8.59	"	"	"	"	"
perfluoroundecanoate	U			8.59	"	"	"	"	"
perfluorododecanoate	U			8.59	"	"	"	"	"
perfluorotridecanoate	U			8.59	"	"	"	"	"
perfluorotetradecanoate	U			8.59	"	"	"	"	"
perfluorobutyl sulfonate	10.1			8.59	"	"	"	"	"
perfluorohexyl sulfonate	14.4			8.59	"	"	"	"	"
perfluoroctyl sulfonate	42.5			8.59	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.59	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190429-11 (1905002-22)

Matrix: Water

Sampled: Apr-29-19 09:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.59	ng/L	1	B19E006	May-06-19	May-06-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	424			8.59	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.59	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.59	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.59	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.59	"	"	"	"	"
N-MeFOSAA	U			8.59	"	"	"	"	"
N-EtFOSAA	U			8.59	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.59	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	105			91.1%	70-130	"	"	"	"
D3-N-MeFOSAA	102			88.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	94.1			84.6%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	117			107%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	105			97.9%	70-130	"	"	"	"
M9PFNA	114			99.3%	70-130	"	"	"	"
M8PFOSA	100			87.1%	70-130	"	"	"	"
M8PFOS	102			92.6%	70-130	"	"	"	"
M8PFOA	122			106%	70-130	"	"	"	"
M7PFUnA	108			93.9%	70-130	"	"	"	"
M6PFDA	111			97.0%	70-130	"	"	"	"
M5PPeA	139			121%	70-130	"	"	"	"
M5PFHxA	127			111%	70-130	"	"	"	"
M4PFHpA	121			105%	70-130	"	"	"	"
M3PFHxS	111			102%	70-130	"	"	"	"
M3PFBS	130			122%	70-130	"	"	"	"
M2PTreA	28.2	Q		24.5%	70-130	"	"	"	"
MPFDaA	89.9			78.3%	70-130	"	"	"	"
MPFBA	140			122%	70-130	"	"	"	"



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190426-11 (1905002-23)

Matrix: Water

Sampled: Apr-26-19 10:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.7	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			41.7	"	"	"	"	"
perfluorohexanoate	42.4			8.33	"	"	"	"	"
perfluoroheptanoate	14.9			8.33	"	"	"	"	"
perfluoroctanoate	U			8.33	"	"	"	"	"
perfluorononanoate	U			8.33	"	"	"	"	"
perfluorodecanoate	U			8.33	"	"	"	"	"
perfluoroundecanoate	U			8.33	"	"	"	"	"
perfluorododecanoate	U			8.33	"	"	"	"	"
perfluorotridecanoate	U			8.33	"	"	"	"	"
perfluorotetradecanoate	U			8.33	"	"	"	"	"
perfluorobutyl sulfonate	10.3			8.33	"	"	"	"	"
perfluorohexyl sulfonate	14.3			8.33	"	"	"	"	"
perfluoroctyl sulfonate	44.1			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.33	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	466			8.33	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.33	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.33	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.33	"	"	"	"	"
N-MeFOSAA	U			8.33	"	"	"	"	"
N-EtFOSAA	U			8.33	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.33	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	99.4			93.2%	70-130		"	"	"
D3-N-MeFOSAA	104			97.2%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	91.0			88.2%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	120			119%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	104			104%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190426-11 (1905002-23)

Matrix: Water

Sampled: Apr-26-19 10:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	105			98.8%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	92.3			86.6%	70-130	"	"	"	
M8PFOS	101			99.4%	70-130	"	"	"	
M8PFOA	112			105%	70-130	"	"	"	
M7PFUnA	93.1			87.4%	70-130	"	"	"	
M6PFDA	102			96.1%	70-130	"	"	"	
M5PPPeA	129			121%	70-130	"	"	"	
M5PFHxA	121			113%	70-130	"	"	"	
M4PFHpA	112			105%	70-130	"	"	"	
M3PFHxS	100			99.5%	70-130	"	"	"	
M3PBBS	118			119%	70-130	"	"	"	
M2PFTreA	2.37	Q		2.23%	70-130	"	"	"	
MPFDaA	69.4	Q		65.1%	70-130	"	"	"	
MPFBA	131			123%	70-130	"	"	"	

ITC-BB-07-20190427-11 (1905002-24)

Matrix: Water

Sampled: Apr-27-19 10:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.9	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.9	"	"	"	"	"
perfluorohexanoate	43.4			8.58	"	"	"	"	"
perfluoroheptanoate	15.5			8.58	"	"	"	"	"
perfluoroctanoate	9.03			8.58	"	"	"	"	"
perfluorononanoate	U			8.58	"	"	"	"	"
perfluorodecanoate	U			8.58	"	"	"	"	"
perfluoroundecanoate	U			8.58	"	"	"	"	"
perfluorododecanoate	U			8.58	"	"	"	"	"
perfluorotridecanoate	U			8.58	"	"	"	"	"
perfluorotetradecanoate	U			8.58	"	"	"	"	"
perfluorobutyl sulfonate	10.1			8.58	"	"	"	"	"
perfluorohexyl sulfonate	14.1			8.58	"	"	"	"	"
perfluoroctyl sulfonate	43.8			8.58	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.58	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190427-11 (1905002-24)

Matrix: Water

Sampled: Apr-27-19 10:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.58	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	466			8.58	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.58	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.58	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.58	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.58	"	"	"	"	"
N-MeFOSAA	U			8.58	"	"	"	"	"
N-EtFOSAA	U			8.58	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.58	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	111			97.0%	70-130	"	"	"	"
D3-N-MeFOSAA	115			100%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	100			90.2%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	130			120%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	111			104%	70-130	"	"	"	"
M9PFNA	116			101%	70-130	"	"	"	"
M8PFOSA	101			88.3%	70-130	"	"	"	"
M8PFOS	105			95.4%	70-130	"	"	"	"
M8PFOA	123			107%	70-130	"	"	"	"
M7PFUnA	104			91.1%	70-130	"	"	"	"
M6PFDA	110			95.8%	70-130	"	"	"	"
M5PPeA	138			121%	70-130	"	"	"	"
M5PFHxA	128			112%	70-130	"	"	"	"
M4PFHpA	124			108%	70-130	"	"	"	"
M3PFHxS	115			106%	70-130	"	"	"	"
M3PFBS	127			119%	70-130	"	"	"	"
M2PTreA	4.49	Q		3.92%	70-130	"	"	"	"
MPFDaA	83.9			73.2%	70-130	"	"	"	"
MPFBA	143			125%	70-130	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190428-11 (1905002-25)

Matrix: Water

Sampled: Apr-28-19 10:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.9	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.9	"	"	"	"	"
perfluorohexanoate	42.0			8.57	"	"	"	"	"
perfluoroheptanoate	15.9			8.57	"	"	"	"	"
perfluoroctanoate	U			8.57	"	"	"	"	"
perfluorononanoate	U			8.57	"	"	"	"	"
perfluorodecanoate	U			8.57	"	"	"	"	"
perfluoroundecanoate	U			8.57	"	"	"	"	"
perfluorododecanoate	U			8.57	"	"	"	"	"
perfluorotridecanoate	U			8.57	"	"	"	"	"
perfluorotetradecanoate	U			8.57	"	"	"	"	"
perfluorobutyl sulfonate	10.4			8.57	"	"	"	"	"
perfluorohexyl sulfonate	13.8			8.57	"	"	"	"	"
perfluoroctyl sulfonate	45.6			8.57	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.57	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.57	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	456			8.57	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.57	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.57	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.57	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.57	"	"	"	"	"
N-MeFOSAA	U			8.57	"	"	"	"	"
N-EtFOSAA	U			8.57	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.57	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	111			97.5%	70-130		"	"	"
D3-N-MeFOSAA	111			96.9%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	101			91.5%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	133			123%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	110			103%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190428-11 (1905002-25)

Matrix: Water

Sampled: Apr-28-19 10:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	118			103%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	104			91.3%	70-130	"	"	"	
M8PFOS	108			98.7%	70-130	"	"	"	
M8PFOA	128			112%	70-130	"	"	"	
M7PFUnA	106			92.3%	70-130	"	"	"	
M6PFDA	114			99.8%	70-130	"	"	"	
M5PPPeA	141			123%	70-130	"	"	"	
M5PFHxA	130			114%	70-130	"	"	"	
M4PFHpA	124			108%	70-130	"	"	"	
M3PFHxS	116			107%	70-130	"	"	"	
M3PBS	130			122%	70-130	"	"	"	
M2PFTreA	4.62	Q		4.04%	70-130	"	"	"	
MPFDaA	82.2			71.9%	70-130	"	"	"	
MPFBA	144			126%	70-130	"	"	"	

ITC-BB-07-20190429-11 (1905002-26)

Matrix: Water

Sampled: Apr-29-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.8	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			41.8	"	"	"	"	"
perfluorohexanoate	43.9			8.36	"	"	"	"	"
perfluoroheptanoate	17.1			8.36	"	"	"	"	"
perfluoroctanoate	8.61			8.36	"	"	"	"	"
perfluorononanoate	U			8.36	"	"	"	"	"
perfluorodecanoate	U			8.36	"	"	"	"	"
perfluoroundecanoate	U			8.36	"	"	"	"	"
perfluorododecanoate	U			8.36	"	"	"	"	"
perfluorotridecanoate	U			8.36	"	"	"	"	"
perfluorotetradecanoate	U			8.36	"	"	"	"	"
perfluorobutyl sulfonate	10.4			8.36	"	"	"	"	"
perfluorohexyl sulfonate	14.9			8.36	"	"	"	"	"
perfluoroctyl sulfonate	51.4			8.36	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.36	"	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190429-11 (1905002-26)

Matrix: Water

Sampled: Apr-29-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.36	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	477			8.36	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.36	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.36	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.36	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.36	"	"	"	"	"
N-MeFOSAA	U			8.36	"	"	"	"	"
N-EtFOSAA	U			8.36	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.36	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	94.8			88.2%	70-130	"	"	"	"
D3-N-MeFOSAA	96.2			89.4%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	98.1			94.2%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	120			117%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	105			104%	70-130	"	"	"	"
M9PFNA	108			101%	70-130	"	"	"	"
M8PFOSA	92.6			86.0%	70-130	"	"	"	"
M8PFOS	92.9			90.2%	70-130	"	"	"	"
M8PFOA	119			110%	70-130	"	"	"	"
M7PFUnA	95.3			88.6%	70-130	"	"	"	"
M6PFDA	103			96.2%	70-130	"	"	"	"
M5PPeA	130			121%	70-130	"	"	"	"
M5PFHxA	123			115%	70-130	"	"	"	"
M4PFHpA	118			110%	70-130	"	"	"	"
M3PFHxS	105			103%	70-130	"	"	"	"
M3PFBS	119			120%	70-130	"	"	"	"
M2PTreA	2.36	Q		2.19%	70-130	"	"	"	"
MPFDaA	70.2	Q		65.2%	70-130	"	"	"	"
MPFBA	131			122%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190429-12 (1905002-27)

Matrix: Water

Sampled: Apr-29-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.5	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	45.8			42.5	"	"	"	"	"
perfluorohexanoate	45.5			8.49	"	"	"	"	"
perfluoroheptanoate	17.1			8.49	"	"	"	"	"
perfluoroctanoate	U			8.49	"	"	"	"	"
perfluorononanoate	U			8.49	"	"	"	"	"
perfluorodecanoate	U			8.49	"	"	"	"	"
perfluoroundecanoate	U			8.49	"	"	"	"	"
perfluorododecanoate	U			8.49	"	"	"	"	"
perfluorotridecanoate	U			8.49	"	"	"	"	"
perfluorotetradecanoate	U			8.49	"	"	"	"	"
perfluorobutyl sulfonate	9.42			8.49	"	"	"	"	"
perfluorohexyl sulfonate	15.6			8.49	"	"	"	"	"
perfluoroctyl sulfonate	45.0			8.49	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.49	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.49	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	497			8.49	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	U			8.49	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.49	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.49	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.49	"	"	"	"	"
N-MeFOSAA	U			8.49	"	"	"	"	"
N-EtFOSAA	U			8.49	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.49	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	105			93.9%	70-130		"	"	"
D3-N-MeFOSAA	104			93.4%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	98.4			91.0%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	131			124%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	107			102%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190429-12 (1905002-27)

Matrix: Water

Sampled: Apr-29-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	114			102%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	97.6			87.3%	70-130	"	"	"	
M8PFOS	103			96.7%	70-130	"	"	"	
M8PFOA	126			113%	70-130	"	"	"	
M7PFUnA	98.5			88.2%	70-130	"	"	"	
M6PFDA	107			96.2%	70-130	"	"	"	
M5PPPeA	138			123%	70-130	"	"	"	
M5PFHxA	130			116%	70-130	"	"	"	
M4PFHpA	122			109%	70-130	"	"	"	
M3PFHxS	110			104%	70-130	"	"	"	
M3PBS	126			121%	70-130	"	"	"	
M2PFTreA	2.92	Q		2.61%	70-130	"	"	"	
MPFDaA	74.8	Q		66.9%	70-130	"	"	"	
MPFBA	143			128%	70-130	"	"	"	

ITC-BB-09-20190426-11 (1905002-28)

Matrix: Water

Sampled: Apr-26-19 10:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.4	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.4	"	"	"	"	"
perfluorohexanoate	19.1			8.48	"	"	"	"	"
perfluoroheptanoate	U			8.48	"	"	"	"	"
perfluoroctanoate	U			8.48	"	"	"	"	"
perfluorononanoate	U			8.48	"	"	"	"	"
perfluorodecanoate	U			8.48	"	"	"	"	"
perfluoroundecanoate	U			8.48	"	"	"	"	"
perfluorododecanoate	U			8.48	"	"	"	"	"
perfluorotridecanoate	U			8.48	"	"	"	"	"
perfluorotetradecanoate	U			8.48	"	"	"	"	"
perfluorobutyl sulfonate	U			8.48	"	"	"	"	"
perfluorohexyl sulfonate	U			8.48	"	"	"	"	"
perfluoroctyl sulfonate	16.0			8.48	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.48	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190426-11 (1905002-28)

Matrix: Water

Sampled: Apr-26-19 10:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.48	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	159			8.48	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.48	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.48	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.48	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.48	"	"	"	"	"
N-MeFOSAA	U			8.48	"	"	"	"	"
N-EtFOSAA	U			8.48	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.48	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	108			97.3%	70-130	"	"	"	"
D3-N-MeFOSAA	104			93.7%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	101			93.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	112			106%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	113			108%	70-130	"	"	"	"
M9PFNA	114			102%	70-130	"	"	"	"
M8PFOSA	96.9			87.1%	70-130	"	"	"	"
M8PFOS	103			97.2%	70-130	"	"	"	"
M8PFOA	122			110%	70-130	"	"	"	"
M7PFUnA	103			92.8%	70-130	"	"	"	"
M6PFDA	110			98.9%	70-130	"	"	"	"
M5PPeA	135			121%	70-130	"	"	"	"
M5PFHxA	125			113%	70-130	"	"	"	"
M4PFHpA	119			107%	70-130	"	"	"	"
M3PFHxS	110			104%	70-130	"	"	"	"
M3PFBS	122			118%	70-130	"	"	"	"
M2PTreA	8.36	Q		7.52%	70-130	"	"	"	"
MPFDaA	85.0			76.4%	70-130	"	"	"	"
MPFBA	133			119%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190427-11 (1905002-29)

Matrix: Water

Sampled: Apr-27-19 10:15

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.5	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			41.5	"	"	"	"	"
perfluorohexanoate	24.9			8.30	"	"	"	"	"
perfluoroheptanoate	10.1			8.30	"	"	"	"	"
perfluoroctanoate	U			8.30	"	"	"	"	"
perfluorononanoate	U			8.30	"	"	"	"	"
perfluorodecanoate	U			8.30	"	"	"	"	"
perfluoroundecanoate	U			8.30	"	"	"	"	"
perfluorododecanoate	U			8.30	"	"	"	"	"
perfluorotridecanoate	U			8.30	"	"	"	"	"
perfluorotetradecanoate	U			8.30	"	"	"	"	"
perfluorobutyl sulfonate	U			8.30	"	"	"	"	"
perfluorohexyl sulfonate	U			8.30	"	"	"	"	"
perfluoroctyl sulfonate	22.1			8.30	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.30	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.30	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	255			8.30	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.30	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.30	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.30	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.30	"	"	"	"	"
N-MeFOSAA	U			8.30	"	"	"	"	"
N-EtFOSAA	U			8.30	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.30	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
D5-N-EtFOSAA	96.7			91.6%		70-130	"	"	"
D3-N-MeFOSAA	105			99.1%		70-130	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	99.0			97.0%		70-130	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	119			119%		70-130	"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	115			116%		70-130	"	"	"



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190427-11 (1905002-29)

Matrix: Water

Sampled: Apr-27-19 10:15

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	109			104%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	93.4			88.5%	70-130	"	"	"	"
M8PFOS	96.9			95.9%	70-130	"	"	"	"
M8PFOA	118			112%	70-130	"	"	"	"
M7PFUnA	92.4			87.5%	70-130	"	"	"	"
M6PFDA	104			98.5%	70-130	"	"	"	"
M5PPPeA	131			124%	70-130	"	"	"	"
M5PFHxA	123			117%	70-130	"	"	"	"
M4PFHpA	115			109%	70-130	"	"	"	"
M3PFHxS	106			106%	70-130	"	"	"	"
M3PBBS	121			124%	70-130	"	"	"	"
M2PFTreA	1.87	Q		1.77%	70-130	"	"	"	"
MPFDaA	66.0	Q		62.6%	70-130	"	"	"	"
MPFBA	133			126%	70-130	"	"	"	"

ITC-BB-09-20190428-11 (1905002-30)

Matrix: Water

Sampled: Apr-28-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.5	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.5	"	"	"	"	"
perfluorohexanoate	30.5			8.50	"	"	"	"	"
perfluoroheptanoate	11.8			8.50	"	"	"	"	"
perfluoroctanoate	U			8.50	"	"	"	"	"
perfluorononanoate	10.4			8.50	"	"	"	"	"
perfluorodecanoate	U			8.50	"	"	"	"	"
perfluoroundecanoate	U			8.50	"	"	"	"	"
perfluorododecanoate	U			8.50	"	"	"	"	"
perfluorotridecanoate	U			8.50	"	"	"	"	"
perfluorotetradecanoate	U			8.50	"	"	"	"	"
perfluorobutyl sulfonate	U			8.50	"	"	"	"	"
perfluorohexyl sulfonate	U			8.50	"	"	"	"	"
perfluoroctyl sulfonate	32.4			8.50	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.50	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190428-11 (1905002-30)

Matrix: Water

Sampled: Apr-28-19 09:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.50	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	321			8.50	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.50	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.50	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.50	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.50	"	"	"	"	"
N-MeFOSAA	U			8.50	"	"	"	"	"
N-EtFOSAA	U			8.50	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.50	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	106			94.5%	70-130	"	"	"	"
D3-N-MeFOSAA	111			99.5%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	103			95.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	128			120%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	118			113%	70-130	"	"	"	"
M9PFNA	118			105%	70-130	"	"	"	"
M8PFOSA	96.6			86.2%	70-130	"	"	"	"
M8PFOS	106			99.0%	70-130	"	"	"	"
M8PFOA	126			112%	70-130	"	"	"	"
M7PFUnA	102			91.3%	70-130	"	"	"	"
M6PFDA	111			98.7%	70-130	"	"	"	"
M5PPeA	138			123%	70-130	"	"	"	"
M5PFHxA	124			111%	70-130	"	"	"	"
M4PFHpA	120			107%	70-130	"	"	"	"
M3PFHxS	112			106%	70-130	"	"	"	"
M3PFBS	128			123%	70-130	"	"	"	"
M2PTreA	8.68	Q		7.75%	70-130	"	"	"	"
MPFDaA	90.9			81.1%	70-130	"	"	"	"
MPFBA	141			126%	70-130	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190429-11 (1905002-31)

Matrix: Water

Sampled: Apr-29-19 09:35

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			43.6	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			43.6	"	"	"	"	"
perfluorohexanoate	37.6			8.73	"	"	"	"	"
perfluoroheptanoate	15.9			8.73	"	"	"	"	"
perfluoroctanoate	U			8.73	"	"	"	"	"
perfluorononanoate	U			8.73	"	"	"	"	"
perfluorodecanoate	U			8.73	"	"	"	"	"
perfluoroundecanoate	U			8.73	"	"	"	"	"
perfluorododecanoate	U			8.73	"	"	"	"	"
perfluorotridecanoate	U			8.73	"	"	"	"	"
perfluorotetradecanoate	U			8.73	"	"	"	"	"
perfluorobutyl sulfonate	U			8.73	"	"	"	"	"
perfluorohexyl sulfonate	11.6			8.73	"	"	"	"	"
perfluoroctyl sulfonate	44.0			8.73	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.73	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.73	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	417			8.73	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	U			8.73	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.73	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.73	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.73	"	"	"	"	"
N-MeFOSAA	U			8.73	"	"	"	"	"
N-EtFOSAA	U			8.73	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.73	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	121			101%	70-130		"	"	"
D3-N-MeFOSAA	122			102%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	115			99.4%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	139			123%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	123			110%	70-130		"	"	"



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Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190429-11 (1905002-31)

Matrix: Water

Sampled: Apr-29-19 09:35

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	128			107%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	107			90.2%	70-130	"	"	"	
M8PFOS	119			104%	70-130	"	"	"	
M8PFOA	133			111%	70-130	"	"	"	
M7PFUnA	115			96.1%	70-130	"	"	"	
M6PFDA	121			102%	70-130	"	"	"	
M5PPPeA	146			122%	70-130	"	"	"	
M5PFHxA	138			116%	70-130	"	"	"	
M4PFHpA	131			110%	70-130	"	"	"	
M3PFHxS	124			110%	70-130	"	"	"	
M3PBS	136			123%	70-130	"	"	"	
M2PFTreA	7.77	Q		6.51%	70-130	"	"	"	
MPFDaA	96.6			81.0%	70-130	"	"	"	
MPFBA	149			125%	70-130	"	"	"	

ITC-BB-11-20190426-11 (1905002-32)

Matrix: Water

Sampled: Apr-26-19 09:55

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.1	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			41.1	"	"	"	"	"
perfluorohexanoate	32.3			8.22	"	"	"	"	"
perfluoroheptanoate	12.3			8.22	"	"	"	"	"
perfluoroctanoate	U			8.22	"	"	"	"	"
perfluorononanoate	U			8.22	"	"	"	"	"
perfluorodecanoate	U			8.22	"	"	"	"	"
perfluoroundecanoate	U			8.22	"	"	"	"	"
perfluorododecanoate	U			8.22	"	"	"	"	"
perfluorotridecanoate	U			8.22	"	"	"	"	"
perfluorotetradecanoate	U			8.22	"	"	"	"	"
perfluorobutyl sulfonate	U			8.22	"	"	"	"	"
perfluorohexyl sulfonate	10.4			8.22	"	"	"	"	"
perfluoroctyl sulfonate	38.9			8.22	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.22	"	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190426-11 (1905002-32)

Matrix: Water

Sampled: Apr-26-19 09:55

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.22	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	342			8.22	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.22	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.22	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.22	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.22	"	"	"	"	"
N-MeFOSAA	U			8.22	"	"	"	"	"
N-EtFOSAA	U			8.22	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.22	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	102			99.3%	70-130	"	"	"	"
D3-N-MeFOSAA	104			101%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	92.9			93.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	119			122%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	111			115%	70-130	"	"	"	"
M9PFNA	111			108%	70-130	"	"	"	"
M8PFOSA	90.6			87.9%	70-130	"	"	"	"
M8PFOS	93.3			94.6%	70-130	"	"	"	"
M8PFOA	114			111%	70-130	"	"	"	"
M7PFUnA	89.9			87.2%	70-130	"	"	"	"
M6PFDA	101			97.6%	70-130	"	"	"	"
M5PPeA	130			126%	70-130	"	"	"	"
M5PFHxA	119			115%	70-130	"	"	"	"
M4PFHpA	114			110%	70-130	"	"	"	"
M3PFHxS	112			114%	70-130	"	"	"	"
M3PFBS	118			123%	70-130	"	"	"	"
M2PTreA	1.77	Q		1.72%	70-130	"	"	"	"
MPFDaA	62.9	Q		61.1%	70-130	"	"	"	"
MPFBA	133			129%	70-130	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190427-11 (1905002-33)

Matrix: Water

Sampled: Apr-27-19 10:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.8	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.8	"	"	"	"	"
perfluorohexanoate	33.8			8.55	"	"	"	"	"
perfluoroheptanoate	13.4			8.55	"	"	"	"	"
perfluoroctanoate	U			8.55	"	"	"	"	"
perfluorononanoate	U			8.55	"	"	"	"	"
perfluorodecanoate	U			8.55	"	"	"	"	"
perfluoroundecanoate	U			8.55	"	"	"	"	"
perfluorododecanoate	U			8.55	"	"	"	"	"
perfluorotridecanoate	U			8.55	"	"	"	"	"
perfluorotetradecanoate	U			8.55	"	"	"	"	"
perfluorobutyl sulfonate	8.61			8.55	"	"	"	"	"
perfluorohexyl sulfonate	11.8			8.55	"	"	"	"	"
perfluoroctyl sulfonate	37.5			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.55	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	374			8.55	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	U			8.55	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.55	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.55	"	"	"	"	"
N-MeFOSAA	U			8.55	"	"	"	"	"
N-EtFOSAA	U			8.55	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.55	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	112			98.5%	70-130		"	"	"
D3-N-MeFOSAA	114			100%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	109			99.3%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	130			121%	70-130		"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	114			108%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190427-11 (1905002-33)

Matrix: Water

Sampled: Apr-27-19 10:05

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	120			106%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	106			93.3%	70-130	"	"	"	
M8PFOS	110			101%	70-130	"	"	"	
M8PFOA	128			112%	70-130	"	"	"	
M7PFUnA	104			91.9%	70-130	"	"	"	
M6PFDA	112			98.9%	70-130	"	"	"	
M5PPPeA	139			123%	70-130	"	"	"	
M5PFHxA	128			113%	70-130	"	"	"	
M4PFHpA	123			108%	70-130	"	"	"	
M3PFHxS	119			111%	70-130	"	"	"	
M3PBS	133			126%	70-130	"	"	"	
M2PFTreA	6.96	Q		6.12%	70-130	"	"	"	
MPFDaA	90.4			79.5%	70-130	"	"	"	
MPFBA	139			123%	70-130	"	"	"	

ITC-BB-11-20190428-11 (1905002-34)

Matrix: Water

Sampled: Apr-28-19 09:40

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.7	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.7	"	"	"	"	"
perfluorohexanoate	39.2			8.54	"	"	"	"	"
perfluoroheptanoate	15.0			8.54	"	"	"	"	"
perfluoroctanoate	U			8.54	"	"	"	"	"
perfluorononanoate	U			8.54	"	"	"	"	"
perfluorodecanoate	U			8.54	"	"	"	"	"
perfluoroundecanoate	U			8.54	"	"	"	"	"
perfluorododecanoate	U			8.54	"	"	"	"	"
perfluorotridecanoate	U			8.54	"	"	"	"	"
perfluorotetradecanoate	U			8.54	"	"	"	"	"
perfluorobutyl sulfonate	9.90			8.54	"	"	"	"	"
perfluorohexyl sulfonate	12.9			8.54	"	"	"	"	"
perfluoroctyl sulfonate	39.5			8.54	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.54	"	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190428-11 (1905002-34)

Matrix: Water

Sampled: Apr-28-19 09:40

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.54	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	430			8.54	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.54	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.54	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.54	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.54	"	"	"	"	"
N-MeFOSAA	U			8.54	"	"	"	"	"
N-EtFOSAA	U			8.54	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.54	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	118			104%	70-130	"	"	"	"
D3-N-MeFOSAA	122			108%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	116			106%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	137			128%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	120			113%	70-130	"	"	"	"
M9PFNA	128			113%	70-130	"	"	"	"
M8PFOSA	111			97.7%	70-130	"	"	"	"
M8PFOS	118			109%	70-130	"	"	"	"
M8PFOA	137			121%	70-130	"	"	"	"
M7PFUnA	110			97.5%	70-130	"	"	"	"
M6PFDA	120			106%	70-130	"	"	"	"
M5PPeA	148	Q		131%	70-130	"	"	"	"
M5PFHxA	138			122%	70-130	"	"	"	"
M4PFHpA	132			117%	70-130	"	"	"	"
M3PFHxS	127			118%	70-130	"	"	"	"
M3PFBS	136			129%	70-130	"	"	"	"
M2PTreA	2.84	Q		2.51%	70-130	"	"	"	"
MPFDaA	83.3			73.7%	70-130	"	"	"	"
MPFBA	149	Q		132%	70-130	"	"	"	"



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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190429-11 (1905002-35)

Matrix: Water

Sampled: Apr-29-19 09:15

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			45.2	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			45.2	"	"	"	"	"
perfluorohexanoate	44.6			9.03	"	"	"	"	"
perfluoroheptanoate	17.6			9.03	"	"	"	"	"
perfluoroctanoate	U			9.03	"	"	"	"	"
perfluorononanoate	U			9.03	"	"	"	"	"
perfluorodecanoate	U			9.03	"	"	"	"	"
perfluoroundecanoate	U			9.03	"	"	"	"	"
perfluorododecanoate	U			9.03	"	"	"	"	"
perfluorotridecanoate	U			9.03	"	"	"	"	"
perfluorotetradecanoate	U			9.03	"	"	"	"	"
perfluorobutyl sulfonate	9.57			9.03	"	"	"	"	"
perfluorohexyl sulfonate	14.5			9.03	"	"	"	"	"
perfluoroctyl sulfonate	48.1			9.03	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.03	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			9.03	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	463			9.03	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			9.03	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			9.03	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			9.03	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			9.03	"	"	"	"	"
N-MeFOSAA	U			9.03	"	"	"	"	"
N-EtFOSAA	U			9.03	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			9.03	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	125			96.6%	70-130		"	"	"
D3-N-MeFOSAA	140			108%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	122			97.4%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	147			120%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	132			109%	70-130		"	"	"



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190429-11 (1905002-35)

Matrix: Water

Sampled: Apr-29-19 09:15

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	142			110%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	122			94.5%	70-130	"	"	"	
M8PFOS	126			102%	70-130	"	"	"	
M8PFOA	144			112%	70-130	"	"	"	
M7PFUnA	129			99.9%	70-130	"	"	"	
M6PFDA	133			103%	70-130	"	"	"	
M5PPPeA	159			123%	70-130	"	"	"	
M5PFHxA	148			115%	70-130	"	"	"	
M4PFHpA	142			110%	70-130	"	"	"	
M3PFHxS	135			111%	70-130	"	"	"	
M3PBBS	148			124%	70-130	"	"	"	
M2PFTreA	23.5	Q		18.2%	70-130	"	"	"	
MPFDaA	113			87.8%	70-130	"	"	"	
MPFBA	159			123%	70-130	"	"	"	

ITC-BB-12-20190426-11 (1905002-36)

Matrix: Water

Sampled: Apr-26-19 08:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			40.4	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			40.4	"	"	"	"	"
perfluorohexanoate	35.6			8.07	"	"	"	"	"
perfluoroheptanoate	13.1			8.07	"	"	"	"	"
perfluoroctanoate	12.3			8.07	"	"	"	"	"
perfluorononanoate	73.8			8.07	"	"	"	"	"
perfluorodecanoate	U			8.07	"	"	"	"	"
perfluoroundecanoate	U			8.07	"	"	"	"	"
perfluorododecanoate	U			8.07	"	"	"	"	"
perfluorotridecanoate	U			8.07	"	"	"	"	"
perfluorotetradecanoate	U			8.07	"	"	"	"	"
perfluorobutyl sulfonate	12.3			8.07	"	"	"	"	"
perfluorohexyl sulfonate	14.9			8.07	"	"	"	"	"
perfluoroctyl sulfonate	49.5			8.07	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.07	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190426-11 (1905002-36)

Matrix: Water

Sampled: Apr-26-19 08:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.07	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	426			8.07	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.07	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.07	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.07	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.07	"	"	"	"	"
N-MeFOSAA	U			8.07	"	"	"	"	"
N-EtFOSAA	U			8.07	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.07	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	89.5			91.1%	70-130	"	"	"	"
D3-N-MeFOSAA	96.3			97.9%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	88.5			93.0%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	126	Q		135%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	104			114%	70-130	"	"	"	"
M9PFNA	108			110%	70-130	"	"	"	"
M8PFOSA	87.5			89.0%	70-130	"	"	"	"
M8PFOS	93.3			99.1%	70-130	"	"	"	"
M8PFOA	115			117%	70-130	"	"	"	"
M7PFUnA	82.8			84.2%	70-130	"	"	"	"
M6PFDA	98.6			100%	70-130	"	"	"	"
M5PPeA	125			127%	70-130	"	"	"	"
M5PFHxA	117			119%	70-130	"	"	"	"
M4PFHpA	112			114%	70-130	"	"	"	"
M3PFHxS	104			112%	70-130	"	"	"	"
M3PFBS	116			127%	70-130	"	"	"	"
M2PTreA	1.46	Q		1.48%	70-130	"	"	"	"
MPFDaA	57.2	Q		58.1%	70-130	"	"	"	"
MPFBA	125			127%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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ITC-BB-12-20190427-11 (1905002-37)

Matrix: Water

Sampled: Apr-27-19 08:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			44.3	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			44.3	"	"	"	"	"
perfluorohexanoate	37.9			8.87	"	"	"	"	"
perfluoroheptanoate	13.6			8.87	"	"	"	"	"
perfluoroctanoate	10.6			8.87	"	"	"	"	"
perfluorononanoate	U			8.87	"	"	"	"	"
perfluorodecanoate	U			8.87	"	"	"	"	"
perfluoroundecanoate	U			8.87	"	"	"	"	"
perfluorododecanoate	U			8.87	"	"	"	"	"
perfluorotridecanoate	U			8.87	"	"	"	"	"
perfluorotetradecanoate	U			8.87	"	"	"	"	"
perfluorobutyl sulfonate	11.1			8.87	"	"	"	"	"
perfluorohexyl sulfonate	14.2			8.87	"	"	"	"	"
perfluoroctyl sulfonate	45.7			8.87	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.87	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.87	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	419			8.87	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	U			8.87	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.87	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.87	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.87	"	"	"	"	"
N-MeFOSAA	U			8.87	"	"	"	"	"
N-EtFOSAA	U			8.87	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.87	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	128			103%	70-130		"	"	"
D3-N-MeFOSAA	139			112%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	120			100%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	147			125%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	134			116%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190427-11 (1905002-37)

Matrix: Water

Sampled: Apr-27-19 08:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	140			113%	70-130	B19E006	May-06-19	May-07-19	
M8PFOSA	119			96.2%	70-130	"	"	"	
M8PFOS	127			108%	70-130	"	"	"	
M8PFOA	146			118%	70-130	"	"	"	
M7PFUnA	123			99.6%	70-130	"	"	"	
M6PFDA	132			107%	70-130	"	"	"	
M5PPPeA	156			126%	70-130	"	"	"	
M5PFHxA	145			117%	70-130	"	"	"	
M4PFHpA	142			115%	70-130	"	"	"	
M3PFHxS	135			115%	70-130	"	"	"	
M3PBS	148			129%	70-130	"	"	"	
M2PFTreA	13.0	Q		10.5%	70-130	"	"	"	
MPFDaA	107			86.1%	70-130	"	"	"	
MPFBA	157			127%	70-130	"	"	"	

ITC-BB-12-20190428-11 (1905002-38)

Matrix: Water

Sampled: Apr-28-19 08:20

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.9	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			42.9	"	"	"	"	"
perfluorohexanoate	38.1			8.59	"	"	"	"	"
perfluoroheptanoate	13.6			8.59	"	"	"	"	"
perfluoroctanoate	10.4			8.59	"	"	"	"	"
perfluorononanoate	U			8.59	"	"	"	"	"
perfluorodecanoate	U			8.59	"	"	"	"	"
perfluoroundecanoate	U			8.59	"	"	"	"	"
perfluorododecanoate	U			8.59	"	"	"	"	"
perfluorotridecanoate	U			8.59	"	"	"	"	"
perfluorotetradecanoate	U			8.59	"	"	"	"	"
perfluorobutyl sulfonate	10.9			8.59	"	"	"	"	"
perfluorohexyl sulfonate	12.4			8.59	"	"	"	"	"
perfluoroctyl sulfonate	46.3			8.59	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.59	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

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US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190428-11 (1905002-38)

Matrix: Water

Sampled: Apr-28-19 08:20

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.59	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	411			8.59	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.59	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.59	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.59	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.59	"	"	"	"	"
N-MeFOSAA	U			8.59	"	"	"	"	"
N-EtFOSAA	U			8.59	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.59	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	123			107%	70-130	"	"	"	"
D3-N-MeFOSAA	122			107%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	109			97.9%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	133			122%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	121			113%	70-130	"	"	"	"
M9PFNA	130			113%	70-130	"	"	"	"
M8PFOSA	106			92.3%	70-130	"	"	"	"
M8PFOS	119			109%	70-130	"	"	"	"
M8PFOA	135			118%	70-130	"	"	"	"
M7PFUnA	111			96.4%	70-130	"	"	"	"
M6PFDA	120			105%	70-130	"	"	"	"
M5PPeA	151	Q		132%	70-130	"	"	"	"
M5PFHxA	138			121%	70-130	"	"	"	"
M4PFHpA	133			116%	70-130	"	"	"	"
M3PFHxS	124			114%	70-130	"	"	"	"
M3PFBS	133			125%	70-130	"	"	"	"
M2PTreA	4.35	Q		3.79%	70-130	"	"	"	"
MPFDaA	90.9			79.2%	70-130	"	"	"	"
MPFBA	152	Q		132%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190429-11 (1905002-39)

Matrix: Water

Sampled: Apr-29-19 08:10

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.6	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	U			41.6	"	"	"	"	"
perfluorohexanoate	38.8			8.33	"	"	"	"	"
perfluoroheptanoate	14.6			8.33	"	"	"	"	"
perfluoroctanoate	10.2			8.33	"	"	"	"	"
perfluorononanoate	U			8.33	"	"	"	"	"
perfluorodecanoate	U			8.33	"	"	"	"	"
perfluoroundecanoate	U			8.33	"	"	"	"	"
perfluorododecanoate	U			8.33	"	"	"	"	"
perfluorotridecanoate	U			8.33	"	"	"	"	"
perfluorotetradecanoate	U			8.33	"	"	"	"	"
perfluorobutyl sulfonate	12.1			8.33	"	"	"	"	"
perfluorohexyl sulfonate	14.9			8.33	"	"	"	"	"
perfluoroctyl sulfonate	53.4			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.33	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	397			8.33	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.33	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.33	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.33	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.33	"	"	"	"	"
N-MeFOSAA	U			8.33	"	"	"	"	"
N-EtFOSAA	U			8.33	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.33	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	112			105%	70-130		"	"	"
D3-N-MeFOSAA	111			104%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	111			108%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	135	Q		134%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	112			112%	70-130		"	"	"



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190429-11 (1905002-39)

Matrix: Water

Sampled: Apr-29-19 08:10

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	122			114%	70-130		B19E006	May-06-19	May-07-19
M8PFOSA	102			95.5%	70-130	"	"	"	"
M8PFOS	108			106%	70-130	"	"	"	"
M8PFOA	128			121%	70-130	"	"	"	"
M7PFUnA	100			94.2%	70-130	"	"	"	"
M6PFDA	113			107%	70-130	"	"	"	"
M5PPPeA	141	Q		133%	70-130	"	"	"	"
M5PFHxA	125			118%	70-130	"	"	"	"
M4PFHpA	125			117%	70-130	"	"	"	"
M3PFHxS	114			113%	70-130	"	"	"	"
M3PBS	124			126%	70-130	"	"	"	"
M2PFTreA	1.55	Q		1.46%	70-130	"	"	"	"
MPFDaA	72.7	Q		68.3%	70-130	"	"	"	"
MPFBA	145	Q		137%	70-130	"	"	"	"

ITC-TB-03-20190426-11 (1905002-40)

Matrix: Water

Sampled: Apr-26-19 11:35

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.4	ng/L	1	B19E006	May-06-19	May-07-19
perfluoropentanoate	109			42.4	"	"	"	"	"
perfluorohexanoate	111			8.48	"	"	"	"	"
perfluoroheptanoate	26.1			8.48	"	"	"	"	"
perfluoroctanoate	15.0			8.48	"	"	"	"	"
perfluorononanoate	U			8.48	"	"	"	"	"
perfluorodecanoate	U			8.48	"	"	"	"	"
perfluoroundecanoate	U			8.48	"	"	"	"	"
perfluorododecanoate	U			8.48	"	"	"	"	"
perfluorotridecanoate	U			8.48	"	"	"	"	"
perfluorotetradecanoate	U			8.48	"	"	"	"	"
perfluorobutyl sulfonate	29.6			8.48	"	"	"	"	"
perfluorohexyl sulfonate	69.0			8.48	"	"	"	"	"
perfluoroctyl sulfonate	257			8.48	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.48	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS

Project Number: [none]

Project Manager: Matthew Loesel

Reported:

May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-TB-03-20190426-11 (1905002-40)

Matrix: Water

Sampled: Apr-26-19 11:35

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	13.6			8.48	ng/L	1	B19E006	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	964			8.48	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.48	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.48	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	12.1			8.48	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.48	"	"	"	"	"
N-MeFOSAA	U			8.48	"	"	"	"	"
N-EtFOSAA	U			8.48	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.48	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	25.3	Q		22.7%	70-130	"	"	"	"
D3-N-MeFOSAA	36.0	Q		32.4%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	83.9			77.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	164	Q		155%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	114			109%	70-130	"	"	"	"
M9PFNA	102			91.1%	70-130	"	"	"	"
M8PFOSA	11.5	Q		10.3%	70-130	"	"	"	"
M8PFOS	92.0			86.3%	70-130	"	"	"	"
M8PFOA	114			103%	70-130	"	"	"	"
M7PFUnA	46.3	Q		41.6%	70-130	"	"	"	"
M6PFDA	78.8			70.7%	70-130	"	"	"	"
M5PPeA	126			113%	70-130	"	"	"	"
M5PFHxA	119			107%	70-130	"	"	"	"
M4PFHpA	114			102%	70-130	"	"	"	"
M3PFHxS	109			104%	70-130	"	"	"	"
M3PFBS	122			117%	70-130	"	"	"	"
M2PTreA	3.25	Q		2.92%	70-130	"	"	"	"
MPFDaA	13.4	Q		12.1%	70-130	"	"	"	"
MPFBA	127			114%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-TB-03-20190427-11 (1905002-41)

Matrix: Water

Sampled: Apr-27-19 08:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			44.6	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	89.9			44.6	"	"	"	"	"
perfluorohexanoate	109			8.92	"	"	"	"	"
perfluoroheptanoate	28.3			8.92	"	"	"	"	"
perfluoroctanoate	20.6			8.92	"	"	"	"	"
perfluorononanoate	10.1			8.92	"	"	"	"	"
perfluorodecanoate	U			8.92	"	"	"	"	"
perfluoroundecanoate	U			8.92	"	"	"	"	"
perfluorododecanoate	U			8.92	"	"	"	"	"
perfluorotridecanoate	U			8.92	"	"	"	"	"
perfluorotetradecanoate	U			8.92	"	"	"	"	"
perfluorobutyl sulfonate	30.2			8.92	"	"	"	"	"
perfluorohexyl sulfonate	84.2			8.92	"	"	"	"	"
perfluoroctyl sulfonate	634			8.92	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.92	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	12.8			8.92	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	1090			8.92	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	12.1			8.92	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.92	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	37.7			8.92	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.92	"	"	"	"	"
N-MeFOSAA	U			8.92	"	"	"	"	"
N-EtFOSAA	U			8.92	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.92	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	105			83.4%	70-130	"	"	"	"
D3-N-MeFOSAA	101			80.3%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	97.5			80.3%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	151			127%	70-130	"	"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	93.1			79.4%	70-130	"	"	"	"



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Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-TB-03-20190427-11 (1905002-41)

Matrix: Water

Sampled: Apr-27-19 08:50

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	111			88.4%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	107			85.4%	70-130	"	"	"	
M8PFOS	105			87.5%	70-130	"	"	"	
M8PFOA	111			88.2%	70-130	"	"	"	
M7PFUnA	105			83.6%	70-130	"	"	"	
M6PFDA	111			88.3%	70-130	"	"	"	
M5PPPeA	109			87.0%	70-130	"	"	"	
M5PFHxA	108			86.3%	70-130	"	"	"	
M4PFHpA	110			87.6%	70-130	"	"	"	
M3PFHxS	109			91.8%	70-130	"	"	"	
M3PBS	104			89.0%	70-130	"	"	"	
M2PFTreA	28.3	Q		22.5%	70-130	"	"	"	
MPFDaA	94.4			75.2%	70-130	"	"	"	
MPFBA	122			97.4%	70-130	"	"	"	

ITC-TB-04-20190426-11 (1905002-42)

Matrix: Water

Sampled: Apr-26-19 11:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	623			43.4	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	441			43.4	"	"	"	"	"
perfluorohexanoate	19600			8.67	"	"	"	"	"
perfluoroheptanoate	329			8.67	"	"	"	"	"
perfluoroctanoate	44.6			8.67	"	"	"	"	"
perfluorononanoate	U			8.67	"	"	"	"	"
perfluorodecanoate	U			8.67	"	"	"	"	"
perfluoroundecanoate	U			8.67	"	"	"	"	"
perfluorododecanoate	U			8.67	"	"	"	"	"
perfluorotridecanoate	U			8.67	"	"	"	"	"
perfluorotetradecanoate	U			8.67	"	"	"	"	"
perfluorobutyl sulfonate	82.5			8.67	"	"	"	"	"
perfluorohexyl sulfonate	186			8.67	"	"	"	"	"
perfluoroctyl sulfonate	222			8.67	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	27.0			8.67	"	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-TB-04-20190426-11 (1905002-42)

Matrix: Water

Sampled: Apr-26-19 11:25

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	57.2			8.67	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	7730			8.67	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.67	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.67	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	17.8			8.67	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.67	"	"	"	"	"
N-MeFOSAA	U			8.67	"	"	"	"	"
N-EtFOSAA	U			8.67	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.67	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	83.4			70.9%	70-130	"	"	"	"
D3-N-MeFOSAA	89.7			76.3%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	97.6			85.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	600	Q		538%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	88.6			80.6%	70-130	"	"	"	"
M9PFNA	109			92.8%	70-130	"	"	"	"
M8PFOSA	68.1	Q		58.0%	70-130	"	"	"	"
M8PFOS	101			89.9%	70-130	"	"	"	"
M8PFOA	109			92.4%	70-130	"	"	"	"
M7PFUnA	94.3			80.2%	70-130	"	"	"	"
M6PFDA	105			89.3%	70-130	"	"	"	"
M5PPeA	109			92.6%	70-130	"	"	"	"
M5PFHxA	78.5	Q		66.8%	70-130	"	"	"	"
M4PFHpA	106			90.3%	70-130	"	"	"	"
M3PFHxS	105			94.0%	70-130	"	"	"	"
M3PFBS	103			94.5%	70-130	"	"	"	"
M2PTreA	5.70	Q		4.85%	70-130	"	"	"	"
MPFDaA	72.6	Q		61.8%	70-130	"	"	"	"
MPFBA	121			103%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-TB-04-20190427-11 (1905002-43)

Matrix: Water

Sampled: Apr-27-19 09:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	447			44.7	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	259			44.7	"	"	"	"	"
perfluorohexanoate	1650			8.94	"	"	"	"	"
perfluoroheptanoate	55.5			8.94	"	"	"	"	"
perfluoroctanoate	22.8			8.94	"	"	"	"	"
perfluorononanoate	13.1			8.94	"	"	"	"	"
perfluorodecanoate	U			8.94	"	"	"	"	"
perfluoroundecanoate	U			8.94	"	"	"	"	"
perfluorododecanoate	U			8.94	"	"	"	"	"
perfluorotridecanoate	U			8.94	"	"	"	"	"
perfluorotetradecanoate	U			8.94	"	"	"	"	"
perfluorobutyl sulfonate	27.8			8.94	"	"	"	"	"
perfluorohexyl sulfonate	103			8.94	"	"	"	"	"
perfluoroctyl sulfonate	874			8.94	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.94	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	16.8			8.94	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	3390			8.94	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	15.9			8.94	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.94	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	52.5			8.94	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.94	"	"	"	"	"
N-MeFOSAA	U			8.94	"	"	"	"	"
N-EtFOSAA	U			8.94	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.94	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	101			80.0%	70-130		"	"	"
D3-N-MeFOSAA	103			81.4%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	100			82.3%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	279	Q		233%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	90.5			76.8%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-TB-04-20190427-11 (1905002-43)

Matrix: Water Sampled: Apr-27-19 09:30 Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	112			89.0%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	108			85.8%	70-130	"	"	"	
M8PFOS	101			83.6%	70-130	"	"	"	
M8PFOA	112			89.1%	70-130	"	"	"	
M7PFUnA	103			81.7%	70-130	"	"	"	
M6PFDA	109			86.9%	70-130	"	"	"	
M5PPPeA	110			87.0%	70-130	"	"	"	
M5PFHxA	110			87.1%	70-130	"	"	"	
M4PFHpA	111			87.8%	70-130	"	"	"	
M3PFHxS	109			91.9%	70-130	"	"	"	
M3PBBS	103			88.3%	70-130	"	"	"	
M2PFTreA	20.2	Q		16.0%	70-130	"	"	"	
MPFDaA	90.0			71.5%	70-130	"	"	"	
MPFBA	131			104%	70-130	"	"	"	

ITC-TB-05-20190427-11 (1905002-44)

Matrix: Water Sampled: Apr-27-19 08:30 Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			50.8	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	64.5			50.8	"	"	"	"	"
perfluorohexanoate	53.1			10.2	"	"	"	"	"
perfluoroheptanoate	18.6			10.2	"	"	"	"	"
perfluoroctanoate	11.6			10.2	"	"	"	"	"
perfluorononanoate	U			10.2	"	"	"	"	"
perfluorodecanoate	U			10.2	"	"	"	"	"
perfluoroundecanoate	U			10.2	"	"	"	"	"
perfluorododecanoate	U			10.2	"	"	"	"	"
perfluorotridecanoate	U			10.2	"	"	"	"	"
perfluorotetradecanoate	U			10.2	"	"	"	"	"
perfluorobutyl sulfonate	19.2			10.2	"	"	"	"	"
perfluorohexyl sulfonate	32.1			10.2	"	"	"	"	"
perfluoroctyl sulfonate	105			10.2	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			10.2	"	"	"	"	"



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Chicago Regional Laboratory

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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-TB-05-20190427-11 (1905002-44)

Matrix: Water

Sampled: Apr-27-19 08:30

Received: Apr-30-19 09:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			10.2	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	126			10.2	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			10.2	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			10.2	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			10.2	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			10.2	"	"	"	"	"
N-MeFOSAA	U			10.2	"	"	"	"	"
N-EtFOSAA	U			10.2	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			10.2	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	139			84.0%	70-130	"	"	"	"
D3-N-MeFOSAA	140			85.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	130			81.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	131			83.8%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	119			77.0%	70-130	"	"	"	"
M9PFNA	146			88.5%	70-130	"	"	"	"
M8PFOSA	148			89.5%	70-130	"	"	"	"
M8PFOS	146			92.7%	70-130	"	"	"	"
M8PFOA	145			87.8%	70-130	"	"	"	"
M7PFUnA	143			86.9%	70-130	"	"	"	"
M6PFDA	145			87.9%	70-130	"	"	"	"
M5PPeA	146			88.7%	70-130	"	"	"	"
M5PFHxA	148			89.5%	70-130	"	"	"	"
M4PFHpA	142			86.1%	70-130	"	"	"	"
M3PFHxS	144			92.1%	70-130	"	"	"	"
M3PFBS	135			87.8%	70-130	"	"	"	"
M2PTreA	122			74.0%	70-130	"	"	"	"
MPFDaA	142			86.1%	70-130	"	"	"	"
MPFBA	151			91.5%	70-130	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190430-15 (1905003-01)

Matrix: Water

Sampled: Apr-30-19 09:30

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			45.6	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			45.6	"	"	"	"	"
perfluorohexanoate	U			9.12	"	"	"	"	"
perfluoroheptanoate	U			9.12	"	"	"	"	"
perfluoroctanoate	U			9.12	"	"	"	"	"
perfluorononanoate	42.1			9.12	"	"	"	"	"
perfluorodecanoate	U			9.12	"	"	"	"	"
perfluoroundecanoate	U			9.12	"	"	"	"	"
perfluorododecanoate	U			9.12	"	"	"	"	"
perfluorotridecanoate	U			9.12	"	"	"	"	"
perfluorotetradecanoate	U			9.12	"	"	"	"	"
perfluorobutyl sulfonate	U			9.12	"	"	"	"	"
perfluorohexyl sulfonate	U			9.12	"	"	"	"	"
perfluoroctyl sulfonate	U			9.12	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.12	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			9.12	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	U			9.12	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			9.12	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			9.12	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			9.12	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			9.12	"	"	"	"	"
N-MeFOSAA	U			9.12	"	"	"	"	"
N-EtFOSAA	U			9.12	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			9.12	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	126			95.3%	70-130		"	"	"
D3-N-MeFOSAA	128			96.8%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	120			93.9%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	114			90.6%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	109			88.2%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190430-15 (1905003-01)

Matrix: Water

Sampled: Apr-30-19 09:30

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	125			94.6%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	128			96.8%	70-130	"	"	"	
M8PFOS	125			99.0%	70-130	"	"	"	
M8PFOA	123			93.2%	70-130	"	"	"	
M7PFUnA	124			93.7%	70-130	"	"	"	
M6PFDA	128			97.0%	70-130	"	"	"	
M5PPPeA	122			92.4%	70-130	"	"	"	
M5PFHxA	127			96.4%	70-130	"	"	"	
M4PFHpA	122			92.5%	70-130	"	"	"	
M3PFHxS	117			94.1%	70-130	"	"	"	
M3PBS	115			93.6%	70-130	"	"	"	
M2PFTreA	96.4			73.1%	70-130	"	"	"	
MPFDaA	121			91.8%	70-130	"	"	"	
MPFBA	133			101%	70-130	"	"	"	

ITC-BB-12-20190430-11 (1905003-02)

Matrix: Water

Sampled: Apr-30-19 08:25

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.1	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	47.3			42.1	"	"	"	"	"
perfluorohexanoate	35.2			8.42	"	"	"	"	"
perfluoroheptanoate	14.3			8.42	"	"	"	"	"
perfluoroctanoate	11.6			8.42	"	"	"	"	"
perfluorononanoate	U			8.42	"	"	"	"	"
perfluorodecanoate	U			8.42	"	"	"	"	"
perfluoroundecanoate	U			8.42	"	"	"	"	"
perfluorododecanoate	U			8.42	"	"	"	"	"
perfluorotridecanoate	U			8.42	"	"	"	"	"
perfluorotetradecanoate	U			8.42	"	"	"	"	"
perfluorobutyl sulfonate	12.0			8.42	"	"	"	"	"
perfluorohexyl sulfonate	13.4			8.42	"	"	"	"	"
perfluoroctyl sulfonate	41.9			8.42	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.42	"	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-12-20190430-11 (1905003-02)

Matrix: Water

Sampled: Apr-30-19 08:25

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.42	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	326			8.42	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.42	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.42	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.42	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.42	"	"	"	"	"
N-MeFOSAA	U			8.42	"	"	"	"	"
N-EtFOSAA	U			8.42	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.42	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	87.4			79.8%	70-130	"	"	"	"
D3-N-MeFOSAA	87.5			79.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	84.6			79.7%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	102			97.7%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	77.5			75.6%	70-130	"	"	"	"
M9PFNA	101			92.6%	70-130	"	"	"	"
M8PFOSA	99.1			90.5%	70-130	"	"	"	"
M8PFOS	97.8			93.2%	70-130	"	"	"	"
M8PFOA	103			94.1%	70-130	"	"	"	"
M7PFUnA	83.8			76.5%	70-130	"	"	"	"
M6PFDA	94.3			86.0%	70-130	"	"	"	"
M5PPeA	102			92.7%	70-130	"	"	"	"
M5PFHxA	104			94.8%	70-130	"	"	"	"
M4PFHpA	100			91.3%	70-130	"	"	"	"
M3PFHxS	102			98.4%	70-130	"	"	"	"
M3PFBS	95.6			93.9%	70-130	"	"	"	"
M2PTreA	2.46	Q		2.24%	70-130	"	"	"	"
MPFDaA	64.5	Q		58.9%	70-130	"	"	"	"
MPFBA	117			107%	70-130	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-11-20190430-11 (1905003-03)

Matrix: Water

Sampled: Apr-30-19 09:30

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.0	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	47.2			42.0	"	"	"	"	"
perfluorohexanoate	43.9			8.39	"	"	"	"	"
perfluoroheptanoate	19.1			8.39	"	"	"	"	"
perfluoroctanoate	10.2			8.39	"	"	"	"	"
perfluorononanoate	18.2			8.39	"	"	"	"	"
perfluorodecanoate	U			8.39	"	"	"	"	"
perfluoroundecanoate	U			8.39	"	"	"	"	"
perfluorododecanoate	U			8.39	"	"	"	"	"
perfluorotridecanoate	U			8.39	"	"	"	"	"
perfluorotetradecanoate	U			8.39	"	"	"	"	"
perfluorobutyl sulfonate	10.4			8.39	"	"	"	"	"
perfluorohexyl sulfonate	16.8			8.39	"	"	"	"	"
perfluoroctyl sulfonate	54.4			8.39	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.39	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.39	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	398			8.39	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHps)	U			8.39	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.39	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.39	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.39	"	"	"	"	"
N-MeFOSAA	U			8.39	"	"	"	"	"
N-EtFOSAA	U			8.39	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.39	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	85.2			78.5%	70-130		"	"	"
D3-N-MeFOSAA	86.2			79.5%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	84.0			79.9%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	101			97.6%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	69.6	Q		68.6%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS

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ITC-BB-11-20190430-11 (1905003-03)

Matrix: Water

Sampled: Apr-30-19 09:30

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	98.3			90.6%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	98.2			90.4%	70-130	"	"	"	
M8PFOS	94.7			91.2%	70-130	"	"	"	
M8PFOA	98.5			90.8%	70-130	"	"	"	
M7PFUnA	85.9			79.2%	70-130	"	"	"	
M6PFDA	96.3			88.7%	70-130	"	"	"	
M5PPPeA	96.7			89.1%	70-130	"	"	"	
M5PFHxA	101			92.8%	70-130	"	"	"	
M4PFHpA	96.9			89.2%	70-130	"	"	"	
M3PFHxS	97.9			95.4%	70-130	"	"	"	
M3PBS	92.5			91.7%	70-130	"	"	"	
M2PFTreA	2.99	Q		2.75%	70-130	"	"	"	
MPFDaA	66.9	Q		61.6%	70-130	"	"	"	
MPFBA	115			106%	70-130	"	"	"	

ITC-BB-09-20190430-12 (1905003-04)

Matrix: Water

Sampled: Apr-30-19 09:35

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.8	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	46.6			42.8	"	"	"	"	"
perfluorohexanoate	39.6			8.55	"	"	"	"	"
perfluoroheptanoate	18.3			8.55	"	"	"	"	"
perfluoroctanoate	9.69			8.55	"	"	"	"	"
perfluorononanoate	U			8.55	"	"	"	"	"
perfluorodecanoate	U			8.55	"	"	"	"	"
perfluoroundecanoate	U			8.55	"	"	"	"	"
perfluorododecanoate	U			8.55	"	"	"	"	"
perfluorotridecanoate	U			8.55	"	"	"	"	"
perfluorotetradecanoate	U			8.55	"	"	"	"	"
perfluorobutyl sulfonate	9.84			8.55	"	"	"	"	"
perfluorohexyl sulfonate	15.4			8.55	"	"	"	"	"
perfluoroctyl sulfonate	52.8			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.55	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190430-12 (1905003-04)

Matrix: Water

Sampled: Apr-30-19 09:35

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.55	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	385			8.55	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.55	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.55	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.55	"	"	"	"	"
N-MeFOSAA	U			8.55	"	"	"	"	"
N-EtFOSAA	U			8.55	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.55	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	94.8			83.3%	70-130	"	"	"	"
D3-N-MeFOSAA	96.0			84.4%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	91.5			83.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	107			98.8%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	79.2			74.5%	70-130	"	"	"	"
M9PFNA	108			94.9%	70-130	"	"	"	"
M8PFOSA	106			93.2%	70-130	"	"	"	"
M8PFOS	106			97.6%	70-130	"	"	"	"
M8PFOA	107			94.2%	70-130	"	"	"	"
M7PFUnA	97.0			85.4%	70-130	"	"	"	"
M6PFDA	103			90.2%	70-130	"	"	"	"
M5PPeA	106			93.6%	70-130	"	"	"	"
M5PFHxA	105			92.7%	70-130	"	"	"	"
M4PFHpA	105			92.4%	70-130	"	"	"	"
M3PFHxS	104			96.7%	70-130	"	"	"	"
M3PFBS	100			95.0%	70-130	"	"	"	"
M2PTreA	5.75	Q		5.06%	70-130	"	"	"	"
MPFDaA	76.0	Q		66.9%	70-130	"	"	"	"
MPFBA	126			111%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190430-11 (1905003-05)

Matrix: Water

Sampled: Apr-30-19 09:35

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			41.3	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	50.3			41.3	"	"	"	"	"
perfluorohexanoate	40.8			8.26	"	"	"	"	"
perfluoroheptanoate	17.8			8.26	"	"	"	"	"
perfluoroctanoate	8.60			8.26	"	"	"	"	"
perfluorononanoate	U			8.26	"	"	"	"	"
perfluorodecanoate	U			8.26	"	"	"	"	"
perfluoroundecanoate	U			8.26	"	"	"	"	"
perfluorododecanoate	U			8.26	"	"	"	"	"
perfluorotridecanoate	U			8.26	"	"	"	"	"
perfluorotetradecanoate	U			8.26	"	"	"	"	"
perfluorobutyl sulfonate	9.24			8.26	"	"	"	"	"
perfluorohexyl sulfonate	14.2			8.26	"	"	"	"	"
perfluoroctyl sulfonate	51.0			8.26	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.26	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.26	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	370			8.26	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.26	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.26	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.26	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.26	"	"	"	"	"
N-MeFOSAA	U			8.26	"	"	"	"	"
N-EtFOSAA	U			8.26	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.26	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	78.4			75.2%	70-130		"	"	"
D3-N-MeFOSAA	77.2			74.1%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	74.0			73.3%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	91.3			92.3%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	65.5	Q		67.2%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-09-20190430-11 (1905003-05)

Matrix: Water

Sampled: Apr-30-19 09:35

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	88.8			85.2%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	88.7			85.1%	70-130	"	"	"	
M8PFOS	83.6			83.8%	70-130	"	"	"	
M8PFOA	87.7			84.1%	70-130	"	"	"	
M7PFUnA	77.9			74.7%	70-130	"	"	"	
M6PFDA	86.4			82.9%	70-130	"	"	"	
M5PPPeA	90.5			86.8%	70-130	"	"	"	
M5PFHxA	89.9			86.3%	70-130	"	"	"	
M4PFHpA	90.3			86.6%	70-130	"	"	"	
M3PFHxS	91.4			92.7%	70-130	"	"	"	
M3PBS	85.4			88.2%	70-130	"	"	"	
M2PFTreA	1.99	Q		1.91%	70-130	"	"	"	
MPFDaA	55.9	Q		53.7%	70-130	"	"	"	
MPFBA	101			97.1%	70-130	"	"	"	

ITC-BB-07-20190430-11 (1905003-06)

Matrix: Water

Sampled: Apr-30-19 09:55

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.0	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	48.3			42.0	"	"	"	"	"
perfluorohexanoate	40.9			8.41	"	"	"	"	"
perfluoroheptanoate	17.6			8.41	"	"	"	"	"
perfluoroctanoate	9.14			8.41	"	"	"	"	"
perfluorononanoate	U			8.41	"	"	"	"	"
perfluorodecanoate	U			8.41	"	"	"	"	"
perfluoroundecanoate	U			8.41	"	"	"	"	"
perfluorododecanoate	U			8.41	"	"	"	"	"
perfluorotridecanoate	U			8.41	"	"	"	"	"
perfluorotetradecanoate	U			8.41	"	"	"	"	"
perfluorobutyl sulfonate	9.16			8.41	"	"	"	"	"
perfluorohexyl sulfonate	14.6			8.41	"	"	"	"	"
perfluoroctyl sulfonate	52.9			8.41	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.41	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-07-20190430-11 (1905003-06)

Matrix: Water

Sampled: Apr-30-19 09:55

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.41	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	369			8.41	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.41	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.41	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.41	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.41	"	"	"	"	"
N-MeFOSAA	U			8.41	"	"	"	"	"
N-EtFOSAA	U			8.41	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.41	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	79.9			73.3%	70-130	"	"	"	"
D3-N-MeFOSAA	81.3			74.6%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	72.9	Q		69.1%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	91.1			88.1%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	69.4	Q		68.1%	70-130	"	"	"	"
M9PFNA	94.6			86.8%	70-130	"	"	"	"
M8PFOSA	90.0			82.5%	70-130	"	"	"	"
M8PFOS	86.9			83.3%	70-130	"	"	"	"
M8PFOA	94.8			87.0%	70-130	"	"	"	"
M7PFUnA	79.6			73.0%	70-130	"	"	"	"
M6PFDA	87.3			80.1%	70-130	"	"	"	"
M5PPeA	96.2			88.2%	70-130	"	"	"	"
M5PFHxA	98.5			90.4%	70-130	"	"	"	"
M4PFHpA	97.3			89.2%	70-130	"	"	"	"
M3PFHxS	94.8			91.9%	70-130	"	"	"	"
M3PFBS	92.0			90.8%	70-130	"	"	"	"
M2PTreA	2.18	Q		2.00%	70-130	"	"	"	"
MPFDaA	60.6	Q		55.6%	70-130	"	"	"	"
MPFBA	114			104%	70-130	"	"	"	"



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Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190430-11 (1905003-07)

Matrix: Water

Sampled: Apr-30-19 09:20

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.2	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	43.1			42.2	"	"	"	"	"
perfluorohexanoate	36.5			8.43	"	"	"	"	"
perfluoroheptanoate	16.2			8.43	"	"	"	"	"
perfluoroctanoate	8.51			8.43	"	"	"	"	"
perfluorononanoate	U			8.43	"	"	"	"	"
perfluorodecanoate	U			8.43	"	"	"	"	"
perfluoroundecanoate	U			8.43	"	"	"	"	"
perfluorododecanoate	U			8.43	"	"	"	"	"
perfluorotridecanoate	U			8.43	"	"	"	"	"
perfluorotetradecanoate	U			8.43	"	"	"	"	"
perfluorobutyl sulfonate	9.13			8.43	"	"	"	"	"
perfluorohexyl sulfonate	14.3			8.43	"	"	"	"	"
perfluoroctyl sulfonate	46.2			8.43	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.43	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.43	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	351			8.43	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.43	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.43	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.43	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.43	"	"	"	"	"
N-MeFOSAA	U			8.43	"	"	"	"	"
N-EtFOSAA	U			8.43	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.43	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	82.0			74.6%	70-130		"	"	"
D3-N-MeFOSAA	84.0			76.5%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	71.7	Q		67.4%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	92.3			88.5%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	69.0	Q		67.2%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-05-20190430-11 (1905003-07)

Matrix: Water

Sampled: Apr-30-19 09:20

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	94.9			86.4%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	91.2			83.0%	70-130	"	"	"	
M8PFOS	88.8			84.5%	70-130	"	"	"	
M8PFOA	94.7			86.2%	70-130	"	"	"	
M7PFUnA	81.2			73.9%	70-130	"	"	"	
M6PFDA	90.4			82.3%	70-130	"	"	"	
M5PPPeA	93.1			84.7%	70-130	"	"	"	
M5PFHxA	96.4			87.8%	70-130	"	"	"	
M4PFHpA	95.4			86.8%	70-130	"	"	"	
M3PFHxS	96.3			92.7%	70-130	"	"	"	
M3PBS	91.7			89.8%	70-130	"	"	"	
M2PFTreA	2.40	Q		2.18%	70-130	"	"	"	
MPFDaA	62.0	Q		56.4%	70-130	"	"	"	
MPFBA	110			100%	70-130	"	"	"	

ITC-BB-03-20190430-11 (1905003-08)

Matrix: Water

Sampled: Apr-30-19 09:15

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			46.6	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			46.6	"	"	"	"	"
perfluorohexanoate	35.6			9.32	"	"	"	"	"
perfluoroheptanoate	15.9			9.32	"	"	"	"	"
perfluoroctanoate	10.2			9.32	"	"	"	"	"
perfluorononanoate	U			9.32	"	"	"	"	"
perfluorodecanoate	U			9.32	"	"	"	"	"
perfluoroundecanoate	U			9.32	"	"	"	"	"
perfluorododecanoate	U			9.32	"	"	"	"	"
perfluorotridecanoate	U			9.32	"	"	"	"	"
perfluorotetradecanoate	U			9.32	"	"	"	"	"
perfluorobutyl sulfonate	U			9.32	"	"	"	"	"
perfluorohexyl sulfonate	14.9			9.32	"	"	"	"	"
perfluoroctyl sulfonate	48.8			9.32	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.32	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-03-20190430-11 (1905003-08)

Matrix: Water

Sampled: Apr-30-19 09:15

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			9.32	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	341			9.32	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			9.32	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			9.32	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			9.32	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			9.32	"	"	"	"	"
N-MeFOSAA	U			9.32	"	"	"	"	"
N-EtFOSAA	U			9.32	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			9.32	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	103			74.5%	70-130	"	"	"	"
D3-N-MeFOSAA	99.6			72.0%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	93.6	Q		69.9%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	106			81.2%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	82.3	Q		63.7%	70-130	"	"	"	"
M9PFNA	112			81.1%	70-130	"	"	"	"
M8PFOSA	111			80.4%	70-130	"	"	"	"
M8PFOS	113			85.3%	70-130	"	"	"	"
M8PFOA	113			81.9%	70-130	"	"	"	"
M7PFUnA	104			75.3%	70-130	"	"	"	"
M6PFDA	112			81.1%	70-130	"	"	"	"
M5PPeA	112			80.7%	70-130	"	"	"	"
M5PFHxA	113			82.0%	70-130	"	"	"	"
M4PFHpA	114			82.1%	70-130	"	"	"	"
M3PFHxS	114			87.2%	70-130	"	"	"	"
M3PFBS	107			83.0%	70-130	"	"	"	"
M2PTreA	45.5	Q		32.9%	70-130	"	"	"	"
MPFDoA	93.9	Q		67.9%	70-130	"	"	"	"
MPFBA	130			93.7%	70-130	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-02-20190430-11 (1905003-09)

Matrix: Water

Sampled: Apr-30-19 09:05

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.7	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			42.7	"	"	"	"	"
perfluorohexanoate	32.8			8.55	"	"	"	"	"
perfluoroheptanoate	14.8			8.55	"	"	"	"	"
perfluoroctanoate	9.03			8.55	"	"	"	"	"
perfluorononanoate	10.0			8.55	"	"	"	"	"
perfluorodecanoate	U			8.55	"	"	"	"	"
perfluoroundecanoate	U			8.55	"	"	"	"	"
perfluorododecanoate	U			8.55	"	"	"	"	"
perfluorotridecanoate	U			8.55	"	"	"	"	"
perfluorotetradecanoate	U			8.55	"	"	"	"	"
perfluorobutyl sulfonate	8.91			8.55	"	"	"	"	"
perfluorohexyl sulfonate	14.5			8.55	"	"	"	"	"
perfluoroctyl sulfonate	44.3			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.55	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	320			8.55	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.55	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.55	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.55	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.55	"	"	"	"	"
N-MeFOSAA	U			8.55	"	"	"	"	"
N-EtFOSAA	U			8.55	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.55	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	84.1			74.0%	70-130		"	"	"
D3-N-MeFOSAA	85.1			74.9%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	76.3	Q		69.4%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	94.9			88.0%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	72.8	Q		68.6%	70-130		"	"	"



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS

US EPA Region 5 Chicago Regional Laboratory

ITC-BB-02-20190430-11 (1905003-09)

Matrix: Water

Sampled: Apr-30-19 09:05

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	97.9			86.2%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	95.2			83.8%	70-130	"	"	"	
M8PFOS	90.8			83.5%	70-130	"	"	"	
M8PFOA	99.2			87.4%	70-130	"	"	"	
M7PFUnA	82.8			72.9%	70-130	"	"	"	
M6PFDA	95.3			83.9%	70-130	"	"	"	
M5PPPeA	97.1			85.5%	70-130	"	"	"	
M5PFHxA	98.0			86.3%	70-130	"	"	"	
M4PFHpA	97.1			85.5%	70-130	"	"	"	
M3PFHxS	101			93.9%	70-130	"	"	"	
M3PBS	90.6			85.9%	70-130	"	"	"	
M2PFTreA	3.31	Q		2.92%	70-130	"	"	"	
MPFDaA	63.6	Q		56.0%	70-130	"	"	"	
MPFBA	112			99.0%	70-130	"	"	"	

ITC-BB-01-20190430-11 (1905003-10)

Matrix: Water

Sampled: Apr-30-19 08:50

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			43.1	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	44.8			43.1	"	"	"	"	"
perfluorohexanoate	32.4			8.63	"	"	"	"	"
perfluoroheptanoate	14.8			8.63	"	"	"	"	"
perfluoroctanoate	9.97			8.63	"	"	"	"	"
perfluorononanoate	U			8.63	"	"	"	"	"
perfluorodecanoate	U			8.63	"	"	"	"	"
perfluoroundecanoate	U			8.63	"	"	"	"	"
perfluorododecanoate	U			8.63	"	"	"	"	"
perfluorotridecanoate	U			8.63	"	"	"	"	"
perfluorotetradecanoate	U			8.63	"	"	"	"	"
perfluorobutyl sulfonate	10.4			8.63	"	"	"	"	"
perfluorohexyl sulfonate	13.9			8.63	"	"	"	"	"
perfluoroctyl sulfonate	43.9			8.63	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.63	"	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-01-20190430-11 (1905003-10)

Matrix: Water

Sampled: Apr-30-19 08:50

Received: May-01-19 10:40

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			8.63	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	325			8.63	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.63	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.63	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.63	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.63	"	"	"	"	"
N-MeFOSAA	U			8.63	"	"	"	"	"
N-EtFOSAA	U			8.63	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.63	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	90.2			77.7%	70-130	"	"	"	"
D3-N-MeFOSAA	92.4			79.6%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	82.7			73.6%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	96.9			87.9%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	75.5	Q		69.6%	70-130	"	"	"	"
M9PFNA	103			88.6%	70-130	"	"	"	"
M8PFOSA	101			87.4%	70-130	"	"	"	"
M8PFOS	97.9			88.2%	70-130	"	"	"	"
M8PFOA	103			88.8%	70-130	"	"	"	"
M7PFUnA	90.0			77.6%	70-130	"	"	"	"
M6PFDA	97.3			83.9%	70-130	"	"	"	"
M5PPeA	101			86.9%	70-130	"	"	"	"
M5PFHxA	102			87.8%	70-130	"	"	"	"
M4PFHpA	100			86.5%	70-130	"	"	"	"
M3PFHxS	100			91.4%	70-130	"	"	"	"
M3PFBS	94.4			87.5%	70-130	"	"	"	"
M2PTreA	3.79	Q		3.26%	70-130	"	"	"	"
MPFDaA	73.3	Q		63.1%	70-130	"	"	"	"
MPFBA	122			105%	70-130	"	"	"	"



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-01-20190501-11 (1905005-01)

Matrix: Water

Sampled: May-01-19 08:45

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			43.0	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	44.0			43.0	"	"	"	"	"
perfluorohexanoate	34.2			8.60	"	"	"	"	"
perfluoroheptanoate	16.0			8.60	"	"	"	"	"
perfluoroctanoate	9.64			8.60	"	"	"	"	"
perfluorononanoate	U			8.60	"	"	"	"	"
perfluorodecanoate	U			8.60	"	"	"	"	"
perfluoroundecanoate	U			8.60	"	"	"	"	"
perfluorododecanoate	U			8.60	"	"	"	"	"
perfluorotridecanoate	U			8.60	"	"	"	"	"
perfluorotetradecanoate	U			8.60	"	"	"	"	"
perfluorobutyl sulfonate	9.46			8.60	"	"	"	"	"
perfluorohexyl sulfonate	13.7			8.60	"	"	"	"	"
perfluoroctyl sulfonate	44.4			8.60	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.60	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.60	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	316			8.60	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.60	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.60	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.60	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.60	"	"	"	"	"
N-MeFOSAA	U			8.60	"	"	"	"	"
N-EtFOSAA	U			8.60	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.60	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	88.7			76.9%	70-130		"	"	"
D3-N-MeFOSAA	88.7			76.9%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	78.0	Q		69.9%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	96.0			87.7%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	75.9			70.4%	70-130		"	"	"



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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-01-20190501-11 (1905005-01)

Matrix: Water

Sampled: May-01-19 08:45

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	101			87.4%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	97.0			84.1%	70-130	"	"	"	
M8PFOS	95.5			86.5%	70-130	"	"	"	
M8PFOA	100			87.1%	70-130	"	"	"	
M7PFUnA	87.8			76.1%	70-130	"	"	"	
M6PFDA	97.2			84.2%	70-130	"	"	"	
M5PPPeA	99.2			86.0%	70-130	"	"	"	
M5PFHxA	101			87.9%	70-130	"	"	"	
M4PFHpA	99.7			86.5%	70-130	"	"	"	
M3PFHxS	99.5			91.1%	70-130	"	"	"	
M3PBS	92.9			86.7%	70-130	"	"	"	
M2PFTreA	3.85	Q		3.34%	70-130	"	"	"	
MPFDaA	71.6	Q		62.0%	70-130	"	"	"	
MPFBA	116			101%	70-130	"	"	"	

ITC-BB-01-20190501-15 (1905005-02)

Matrix: Water

Sampled: May-01-19 09:00

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			47.1	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			47.1	"	"	"	"	"
perfluorohexanoate	U			9.43	"	"	"	"	"
perfluoroheptanoate	U			9.43	"	"	"	"	"
perfluoroctanoate	U			9.43	"	"	"	"	"
perfluorononanoate	U			9.43	"	"	"	"	"
perfluorodecanoate	U			9.43	"	"	"	"	"
perfluoroundecanoate	U			9.43	"	"	"	"	"
perfluorododecanoate	U			9.43	"	"	"	"	"
perfluorotridecanoate	U			9.43	"	"	"	"	"
perfluorotetradecanoate	U			9.43	"	"	"	"	"
perfluorobutyl sulfonate	U			9.43	"	"	"	"	"
perfluorohexyl sulfonate	U			9.43	"	"	"	"	"
perfluoroctyl sulfonate	U			9.43	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.43	"	"	"	"	"



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Chicago Regional Laboratory

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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-01-20190501-15 (1905005-02)

Matrix: Water

Sampled: May-01-19 09:00

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			9.43	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	U			9.43	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			9.43	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			9.43	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			9.43	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			9.43	"	"	"	"	"
N-MeFOSAA	U			9.43	"	"	"	"	"
N-EtFOSAA	U			9.43	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			9.43	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	122			86.3%	70-130	"	"	"	"
D3-N-MeFOSAA	124			87.6%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	108			78.8%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	109			81.0%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:2 FTS	101			76.1%	70-130	"	"	"	"
M9PFNA	126			88.6%	70-130	"	"	"	"
M8PFOSA	132			93.3%	70-130	"	"	"	"
M8PFOS	125			92.5%	70-130	"	"	"	"
M8PFOA	125			88.0%	70-130	"	"	"	"
M7PFUnA	122			86.3%	70-130	"	"	"	"
M6PFDA	128			90.2%	70-130	"	"	"	"
M5PPeA	125			88.3%	70-130	"	"	"	"
M5PFHxA	124			87.3%	70-130	"	"	"	"
M4PFHpA	122			86.4%	70-130	"	"	"	"
M3PFHxS	124			92.6%	70-130	"	"	"	"
M3PFBS	118			89.3%	70-130	"	"	"	"
M2PFTreA	107			75.8%	70-130	"	"	"	"
MPFDaA	123			86.9%	70-130	"	"	"	"
MPFBA	130			91.7%	70-130	"	"	"	"



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Chicago Regional Laboratory

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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-02-20190501-11 (1905005-03)

Matrix: Water

Sampled: May-01-19 09:10

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			42.2	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			42.2	"	"	"	"	"
perfluorohexanoate	36.0			8.44	"	"	"	"	"
perfluoroheptanoate	16.3			8.44	"	"	"	"	"
perfluoroctanoate	8.64			8.44	"	"	"	"	"
perfluorononanoate	U			8.44	"	"	"	"	"
perfluorodecanoate	U			8.44	"	"	"	"	"
perfluoroundecanoate	U			8.44	"	"	"	"	"
perfluorododecanoate	U			8.44	"	"	"	"	"
perfluorotridecanoate	U			8.44	"	"	"	"	"
perfluorotetradecanoate	U			8.44	"	"	"	"	"
perfluorobutyl sulfonate	9.73			8.44	"	"	"	"	"
perfluorohexyl sulfonate	14.1			8.44	"	"	"	"	"
perfluoroctyl sulfonate	46.9			8.44	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.44	"	"	"	"	"
perfluoro-1-pentanesulfonate (PFPeS)	U			8.44	"	"	"	"	"
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	338			8.44	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			8.44	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			8.44	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			8.44	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			8.44	"	"	"	"	"
N-MeFOSAA	U			8.44	"	"	"	"	"
N-EtFOSAA	U			8.44	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			8.44	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	79.4			72.1%	70-130		"	"	"
D3-N-MeFOSAA	79.5			72.2%	70-130		"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	69.5	Q		65.2%	70-130		"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	91.4			87.4%	70-130		"	"	"
perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	69.5	Q		67.5%	70-130		"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS US EPA Region 5 Chicago Regional Laboratory

ITC-BB-02-20190501-11 (1905005-03)

Matrix: Water

Sampled: May-01-19 09:10

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
M9PFNA	91.4			83.0%	70-130	B19E007	May-06-19	May-07-19	
M8PFOSA	88.8			80.6%	70-130	"	"	"	
M8PFOS	87.6			83.2%	70-130	"	"	"	
M8PFOA	92.6			84.1%	70-130	"	"	"	
M7PFUnA	80.0			72.6%	70-130	"	"	"	
M6PFDA	89.5			81.2%	70-130	"	"	"	
M5PPPeA	88.3			80.2%	70-130	"	"	"	
M5PFHxA	94.5			85.8%	70-130	"	"	"	
M4PFHpA	90.9			82.5%	70-130	"	"	"	
M3PFHxS	93.0			89.3%	70-130	"	"	"	
M3PBS	86.8			84.8%	70-130	"	"	"	
M2PFTreA	2.48	Q		2.25%	70-130	"	"	"	
MPFDaA	62.2	Q		56.4%	70-130	"	"	"	
MPFBA	105			95.2%	70-130	"	"	"	

ITC-BB-03-20190501-11 (1905005-04)

Matrix: Water

Sampled: May-01-19 09:25

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluorobutanoate	U			45.7	ng/L	1	B19E007	May-06-19	May-07-19
perfluoropentanoate	U			45.7	"	"	"	"	"
perfluorohexanoate	39.1			9.14	"	"	"	"	"
perfluoroheptanoate	16.3			9.14	"	"	"	"	"
perfluoroctanoate	U			9.14	"	"	"	"	"
perfluorononanoate	U			9.14	"	"	"	"	"
perfluorodecanoate	U			9.14	"	"	"	"	"
perfluoroundecanoate	U			9.14	"	"	"	"	"
perfluorododecanoate	U			9.14	"	"	"	"	"
perfluorotridecanoate	U			9.14	"	"	"	"	"
perfluorotetradecanoate	U			9.14	"	"	"	"	"
perfluorobutyl sulfonate	9.96			9.14	"	"	"	"	"
perfluorohexyl sulfonate	13.9			9.14	"	"	"	"	"
perfluoroctyl sulfonate	48.0			9.14	"	"	"	"	"
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.14	"	"	"	"	"



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Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS
US EPA Region 5 Chicago Regional Laboratory

ITC-BB-03-20190501-11 (1905005-04)

Matrix: Water

Sampled: May-01-19 09:25

Received: May-02-19 09:15

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
perfluoro-1-pentanesulfonate (PFPeS)	U			9.14	ng/L	1	B19E007	May-06-19	May-07-19
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	333			9.14	"	"	"	"	"
perfluoro-1-heptanesulfonate (PFHpS)	U			9.14	"	"	"	"	"
perfluoro-1-octanesulfonamide (FOSA)	U			9.14	"	"	"	"	"
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			9.14	"	"	"	"	"
perfluoro-1-nonanesulfonate (PFNS)	U			9.14	"	"	"	"	"
N-MeFOSAA	U			9.14	"	"	"	"	"
N-EtFOSAA	U			9.14	"	"	"	"	"
perfluoro-1-decanesulfonate (PFDS)	U			9.14	"	"	"	"	"
Surogate	Result			%REC	%REC Limits		Batch	Prepared	Analyzed
D5-N-EtFOSAA	99.2			74.9%	70-130	"	"	"	"
D3-N-MeFOSAA	99.2			74.9%	70-130	"	"	"	"
perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	92.4			72.0%	70-130	"	"	"	"
perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	108			85.7%	70-130	"	"	"	"
perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:2 FTS	79.7	Q		64.4%	70-130	"	"	"	"
M9PFNA	113			85.6%	70-130	"	"	"	"
M8PFOSA	116			87.4%	70-130	"	"	"	"
M8PFOS	108			84.8%	70-130	"	"	"	"
M8PFOA	111			84.1%	70-130	"	"	"	"
M7PFUnA	105			79.4%	70-130	"	"	"	"
M6PFDA	110			82.7%	70-130	"	"	"	"
M5PPeA	110			82.8%	70-130	"	"	"	"
M5PFHxA	114			86.1%	70-130	"	"	"	"
M4PFHpA	111			83.5%	70-130	"	"	"	"
M3PFHxS	113			90.5%	70-130	"	"	"	"
M3PFBS	108			87.5%	70-130	"	"	"	"
M2PTreA	34.0	Q		25.7%	70-130	"	"	"	"
MPFDaA	96.9			73.2%	70-130	"	"	"	"
MPFBA	127			95.9%	70-130	"	"	"	"



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Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Blank (B19E006-BLK1)

Prepared & Analyzed: May-06-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	U			50.0	ng/L	"					
perfluoropentanoate	U			50.0	"	"					
perfluorohexanoate	U			10.0	"	"					
perfluoroheptanoate	U			10.0	"	"					
perfluoroctanoate	U			10.0	"	"					
perfluorononanoate	U			10.0	"	"					
perfluorodecanoate	U			10.0	"	"					
perfluoroundecanoate	U			10.0	"	"					
perfluorododecanoate	U			10.0	"	"					
perfluorotridecanoate	U			10.0	"	"					
perfluorotetradecanoate	U			10.0	"	"					
perfluorobutyl sulfonate	U			10.0	"	"					
perfluorohexyl sulfonate	U			10.0	"	"					
perfluoroctyl sulfonate	U			10.0	"	"					
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			10.0	"	"					
perfluoro-1-pentanesulfonate (PFPeS)	U			10.0	"	"					
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	U			10.0	"	"					
perfluoro-1-heptanesulfonate (PFHpS)	U			10.0	"	"					
perfluoro-1-octanesulfonamide (FOSA)	U			10.0	"	"					
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			10.0	"	"					
perfluoro-1-nananesulfonate (PFNS)	U			10.0	"	"					
N-MeFOSAA	U			10.0	"	"					
N-EtFOSAA	U			10.0	"	"					
perfluoro-1-decanesulfonate (PFDS)	U			10.0	"	"					
Surrogate: D5-N-EtFOSAA	147				"	160.0		92.0%	70-130		
Surrogate: D3-N-MeFOSAA	150				"	160.0		93.6%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	151				"	154.9		97.2%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	136				"	151.8		89.5%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Blank (B19E006-BLK1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:	141				ng/L	149.6		94.2%	70-130		
Surrogate: M9PFNA	155				"	160.0		96.8%	70-130		
Surrogate: M8PFOSA	151				"	160.0		94.6%	70-130		
Surrogate: M8PFOS	146				"	153.1		95.6%	70-130		
Surrogate: M8PFOA	161				"	160.0		101%	70-130		
Surrogate: M7PFUnA	156				"	160.0		97.8%	70-130		
Surrogate: M6PFDA	156				"	160.0		97.2%	70-130		
Surrogate: M5PFPeA	166				"	160.0		104%	70-130		
Surrogate: M5PFHxA	156				"	160.0		97.8%	70-130		
Surrogate: M4PFHpA	156				"	160.0		97.5%	70-130		
Surrogate: M3PFHxS	141				"	151.4		93.2%	70-130		
Surrogate: M3PFBS	148				"	148.6		99.8%	70-130		
Surrogate: M2PFTreA	152				"	160.0		94.9%	70-130		
Surrogate: MPFDaA	158				"	160.0		98.5%	70-130		
Surrogate: MPFBA	168				"	160.0		105%	70-130		

Blank (B19E006-BLK2)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	U			50.0	ng/L						
perfluoropentanoate	U			50.0	"						
perfluorohexanoate	U			10.0	"						
perfluoroheptanoate	U			10.0	"						
perfluorooctanoate	U			10.0	"						
perfluorononanoate	U			10.0	"						
perfluorodecanoate	U			10.0	"						
perfluoroundecanoate	U			10.0	"						
perfluorododecanoate	U			10.0	"						
perfluorotridecanoate	U			10.0	"						
perfluorotetradecanoate	U			10.0	"						
perfluorobutyl sulfonate	U			10.0	"						
perfluorohexyl sulfonate	U			10.0	"						
perfluoroctyl sulfonate	U			10.0	"						



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Phone:(312)353-8370 Fax:(312)886-2591

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Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Blank (B19E006-BLK2)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			10.0	ng/L						
perfluoro-1-pentanesulfonate (PFPeS)	U			10.0	"						
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	U			10.0	"						
perfluoro-1-heptanesulfonate (PFHpS)	U			10.0	"						
perfluoro-1-octanesulfonamide (FOSA)	U			10.0	"						
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			10.0	"						
perfluoro-1-nananesulfonate (PFNS)	U			10.0	"						
N-MeFOSAA	U			10.0	"						
N-EtFOSAA	U			10.0	"						
perfluoro-1-decanesulfonate (PFDS)	U			10.0	"						
Surrogate: D5-N-EtFOSAA	157			"	160.0		98.0%	70-130			
Surrogate: D3-N-MeFOSAA	158			"	160.0		98.5%	70-130			
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	145			"	154.9		93.5%	70-130			
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	135			"	151.8		88.7%	70-130			
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	140			"	149.6		93.4%	70-130			
Surrogate: M9PFNA	154			"	160.0		96.3%	70-130			
Surrogate: M8PFOSA	145			"	160.0		90.6%	70-130			
Surrogate: M8PFOS	145			"	153.1		94.9%	70-130			
Surrogate: M8PFOA	159			"	160.0		99.7%	70-130			
Surrogate: M7PFUnA	155			"	160.0		96.6%	70-130			
Surrogate: M6PFDA	155			"	160.0		96.7%	70-130			
Surrogate: M5PFPeA	172			"	160.0		108%	70-130			
Surrogate: M5PFHxA	163			"	160.0		102%	70-130			
Surrogate: M4PFHpA	157			"	160.0		98.1%	70-130			
Surrogate: M3PFHxS	148			"	151.4		97.8%	70-130			
Surrogate: M3PFBs	152			"	148.6		102%	70-130			
Surrogate: M2PFTreA	156			"	160.0		97.4%	70-130			
Surrogate: MPFDaA	155			"	160.0		97.1%	70-130			
Surrogate: MPFBa	175			"	160.0		110%	70-130			



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Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

LCS (B19E006-BS1)

Prepared & Analyzed: May-06-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	860			50.0	ng/L	800.0		108%	70-130		
perfluoropentanoate	848			50.0	"	800.0		106%	70-130		
perfluorohexanoate	168			10.0	"	160.0		105%	70-130		
perfluoroheptanoate	158			10.0	"	160.0		99.0%	70-130		
perfluoroctanoate	161			10.0	"	160.0		101%	70-130		
perfluorononanoate	149			10.0	"	160.0		93.3%	70-130		
perfluorodecanoate	154			10.0	"	160.0		96.2%	70-130		
perfluoroundecanoate	157			10.0	"	160.0		97.9%	70-130		
perfluorododecanoate	157			10.0	"	160.0		98.3%	70-130		
perfluorotridecanoate	159			10.0	"	160.0		99.4%	70-130		
perfluorotetradecanoate	159			10.0	"	160.0		99.6%	70-130		
perfluorobutyl sulfonate	154			10.0	"	160.0		96.2%	70-130		
perfluorohexyl sulfonate	148			10.0	"	160.0		92.6%	70-130		
perfluoroctyl sulfonate	153			10.0	"	160.0		95.8%	70-130		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	162			10.0	"	160.0		101%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	164			10.0	"	160.0		102%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	165			10.0	"	160.0		103%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	150			10.0	"	160.0		93.5%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	141			10.0	"	160.0		87.9%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	155			10.0	"	160.0		96.9%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	157			10.0	"	160.0		97.9%	70-130		
N-MeFOSAA	155			10.0	"	160.0		97.0%	70-130		
N-EtFOSAA	156			10.0	"	160.0		97.3%	70-130		
perfluoro-1-decanesulfonate (PFDS)	150			10.0	"	160.0		93.9%	70-130		
Surrogate: D5-N-EtFOSAA	164				"	160.0		103%	70-130		
Surrogate: D3-N-MeFOSAA	159				"	160.0		99.4%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	154				"	154.9		99.1%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	149				"	151.8		98.0%	70-130		



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Batch B19E006 - *** DEFAULT PREP ***

LCS (B19E006-BS1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:	156				ng/L	149.6		104%	70-130		
Surrogate: M9PFNA	155				"	160.0		96.9%	70-130		
Surrogate: M8PFOSA	145				"	160.0		90.7%	70-130		
Surrogate: M8PFOS	145				"	153.1		94.5%	70-130		
Surrogate: M8PFOA	164				"	160.0		102%	70-130		
Surrogate: M7PFUnA	160				"	160.0		100%	70-130		
Surrogate: M6PFDA	159				"	160.0		99.1%	70-130		
Surrogate: M5PFPeA	171				"	160.0		107%	70-130		
Surrogate: M5PFHxA	161				"	160.0		101%	70-130		
Surrogate: M4PFHpA	158				"	160.0		98.7%	70-130		
Surrogate: M3PFHxS	142				"	151.4		93.9%	70-130		
Surrogate: M3PFBS	155				"	148.6		104%	70-130		
Surrogate: M2PFTreA	163				"	160.0		102%	70-130		
Surrogate: MPFDaA	158				"	160.0		98.7%	70-130		
Surrogate: MPFBA	171				"	160.0		107%	70-130		

LCS Dup (B19E006-BSD1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	865			50.0	ng/L	800.0		108%	70-130	0.580	30
perfluoropentanoate	856			50.0	"	800.0		107%	70-130	0.953	30
perfluorohexanoate	168			10.0	"	160.0		105%	70-130	0.163	30
perfluoroheptanoate	157			10.0	"	160.0		98.4%	70-130	0.552	30
perfluorooctanoate	161			10.0	"	160.0		101%	70-130	0.261	30
perfluorononanoate	152			10.0	"	160.0		94.8%	70-130	1.55	30
perfluorodecanoate	151			10.0	"	160.0		94.6%	70-130	1.71	30
perfluoroundecanoate	158			10.0	"	160.0		98.7%	70-130	0.810	30
perfluorododecanoate	160			10.0	"	160.0		99.9%	70-130	1.61	30
perfluorotridecanoate	161			10.0	"	160.0		101%	70-130	1.29	30
perfluorotetradecanoate	162			10.0	"	160.0		101%	70-130	1.83	30
perfluorobutyl sulfonate	159			10.0	"	160.0		99.6%	70-130	3.47	30
perfluorohexyl sulfonate	157			10.0	"	160.0		98.4%	70-130	5.98	30
perfluoroctyl sulfonate	148			10.0	"	160.0		92.3%	70-130	3.73	30



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Project: R06 Deer Park PFAS
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Project Manager: Matthew Loesel

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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

LCS Dup (B19E006-BSD1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	163			10.0	ng/L	160.0		102%	70-130	0.542	30
perfluoro-1-pentanesulfonate (PFPeS)	167			10.0	"	160.0		105%	70-130	2.13	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	168			10.0	"	160.0		105%	70-130	1.81	30
perfluoro-1-heptanesulfonate (PFHpS)	156			10.0	"	160.0		97.7%	70-130	4.32	30
perfluoro-1-octanesulfonamide (FOSA)	148			10.0	"	160.0		92.7%	70-130	5.34	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	158			10.0	"	160.0		98.9%	70-130	2.05	30
perfluoro-1-nonanesulfonate (PFNS)	152			10.0	"	160.0		94.9%	70-130	3.12	30
N-MeFOSAA	165			10.0	"	160.0		103%	70-130	6.00	30
N-EtFOSAA	164			10.0	"	160.0		103%	70-130	5.34	30
perfluoro-1-decanesulfonate (PFDS)	154			10.0	"	160.0		96.2%	70-130	2.38	30
Surrogate: D5-N-EtFOSAA	164				"	160.0		102%	70-130		
Surrogate: D3-N-MeFOSAA	169				"	160.0		105%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	155				"	154.9		100%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	155				"	151.8		102%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	159				"	149.6		106%	70-130		
Surrogate: M9PFNA	157				"	160.0		98.1%	70-130		
Surrogate: M8PFOSA	150				"	160.0		94.0%	70-130		
Surrogate: M8PFOS	157				"	153.1		102%	70-130		
Surrogate: M8PFOA	169				"	160.0		106%	70-130		
Surrogate: M7PFUnA	163				"	160.0		102%	70-130		
Surrogate: M6PFDA	160				"	160.0		100%	70-130		
Surrogate: M5PFPeA	173				"	160.0		108%	70-130		
Surrogate: M5PFHxA	170				"	160.0		106%	70-130		
Surrogate: M4PFHpA	163				"	160.0		102%	70-130		
Surrogate: M3PFHxS	149				"	151.4		98.7%	70-130		
Surrogate: M3PFBs	157				"	148.6		106%	70-130		
Surrogate: M2PFTreA	165				"	160.0		103%	70-130		
Surrogate: MPFDaA	160				"	160.0		100%	70-130		
Surrogate: MPFBa	178				"	160.0		111%	70-130		



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Analysis by LC MS MS - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - * DEFAULT PREP *****

Duplicate (B19E006-DUP1)		Source: 1905002-24		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	16.0			44.5	ng/L		15.4			3.57	30
perfluoropentanoate	36.9			44.5	"		39.6			6.95	30
perfluorohexanoate	42.3			8.90	"		43.4			2.55	30
perfluoroheptanoate	15.4			8.90	"		15.5			0.352	30
perfluoroctanoate	8.23			8.90	"		9.03			9.34	30
perfluorononanoate	17.8	Q		8.90	"		1.01			179	30
perfluorodecanoate	U			8.90	"		U				30
perfluoroundecanoate	2.00			8.90	"		U				30
perfluorododecanoate	U			8.90	"		U				30
perfluorotridecanoate	U			8.90	"		U				30
perfluorotetradecanoate	1.15			8.90	"		U			10.4	30
perfluorobutyl sulfonate	10.1			8.90	"		10.1			0.178	30
perfluorohexyl sulfonate	12.1			8.90	"		14.1			15.6	30
perfluoroctyl sulfonate	44.7			8.90	"		43.8			2.12	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			8.90	"		1.47				30
perfluoro-1-pentanesulfonate (PFPeS)	2.52			8.90	"		2.91			14.3	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	450			8.90	"		466			3.36	30
perfluoro-1-heptanesulfonate (PFHpS)	U			8.90	"		U				30
perfluoro-1-octanesulfonamide (FOSA)	U			8.90	"		U				30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	3.81			8.90	"		4.24			10.6	30
perfluoro-1-nonanesulfonate (PFNS)	U			8.90	"		U				30
N-MeFOSAA	U			8.90	"		U				30
N-EtFOSAA	U			8.90	"		U				30
perfluoro-1-decanesulfonate (PFDS)	U			8.90	"		U				30
Surrogate: D5-N-EtFOSAA	123				"	124.7		98.4%	70-130		
Surrogate: D3-N-MeFOSAA	122				"	124.7		97.6%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	120				"	120.7		99.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	143				"	118.3		121%	70-130		



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Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Duplicate (B19E006-DUP1)		Source: 1905002-24		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate:	123				ng/L	116.6		105%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	124.7		102%	70-130		
Surrogate: M9PFNA	127				"	124.7		96.5%	70-130		
Surrogate: M8PFOSA	112				"	124.7		89.9%	70-130		
Surrogate: M8PFOS	124				"	119.3		104%	70-130		
Surrogate: M8PFOA	136				"	124.7		109%	70-130		
Surrogate: M7PFUnA	120				"	124.7		98.8%	70-130		
Surrogate: M6PFDA	123				"	124.7		122%	70-130		
Surrogate: M5PFPeA	152				"	124.7		110%	70-130		
Surrogate: M5PFHxA	138				"	124.7		108%	70-130		
Surrogate: M4PFHpA	134				"	124.7		108%	70-130		
Surrogate: M3PFHxS	127				"	118.0		108%	70-130		
Surrogate: M3PFBS	142				"	115.8		122%	70-130		
Surrogate: M2PFTreA	31.5	Q			"	124.7		25.2%	70-130		
Surrogate: MPFDaA	107				"	124.7		86.2%	70-130		
Surrogate: MPFBA	154				"	124.7		123%	70-130		

Duplicate (B19E006-DUP2)		Source: 1905002-30		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	13.1			46.8	ng/L		16.2		21.2	30	
perfluoropentanoate	36.7			46.8	"		37.4		1.68	30	
perfluorohexanoate	31.3			9.35	"		30.5		2.75	30	
perfluoroheptanoate	11.8			9.35	"		11.8		0.436	30	
perfluorooctanoate	7.13			9.35	"		6.79		4.76	30	
perfluorononanoate	3.47	Q		9.35	"		10.4		100	30	
perfluorodecanoate	U			9.35	"		U			30	
perfluoroundecanoate	U			9.35	"		U			30	
perfluorododecanoate	U			9.35	"		U			30	
perfluorotridecanoate	U			9.35	"		U			30	
perfluorotetradecanoate	U			9.35	"		U			30	
perfluorobutyl sulfonate	7.34			9.35	"		7.83		6.43	30	
perfluorohexyl sulfonate	10.2			9.35	"		8.16		22.0	30	
perfluoroctyl sulfonate	34.2			9.35	"		32.4		5.26	30	



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Duplicate (B19E006-DUP2)		Source: 1905002-30		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.35	ng/L		U			30	
perfluoro-1-pentanesulfonate (PFPeS)	2.17			9.35	"		2.12			2.21	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	350			9.35	"		321			8.63	30
perfluoro-1-heptanesulfonate (PFHpS)	U			9.35	"		U			30	
perfluoro-1-octanesulfonamide (FOSA)	U			9.35	"		U			30	
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	3.38			9.35	"		U			30	
perfluoro-1-nonanesulfonate (PFNS)	U			9.35	"		U			30	
N-MeFOSAA	U			9.35	"		U			30	
N-EtFOSAA	U			9.35	"		U			30	
perfluoro-1-decanesulfonate (PFDS)	U			9.35	"		U			30	
Surrogate: D5-N-EtFOSAA	135				"	139.3		96.9%	70-130		
Surrogate: D3-N-MeFOSAA	136				"	139.3		97.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	132				"	134.8		98.2%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	155				"	132.2		117%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	147				"	130.2		113%	70-130		
Surrogate: M9PFNA	152				"	139.3		109%	70-130		
Surrogate: M8PFOSA	134				"	139.3		96.3%	70-130		
Surrogate: M8PFOS	132				"	133.3		99.2%	70-130		
Surrogate: M8PFOA	160				"	139.3		115%	70-130		
Surrogate: M7PFUnA	145				"	139.3		104%	70-130		
Surrogate: M6PFDA	142				"	139.3		102%	70-130		
Surrogate: M5PFPeA	172				"	139.3		123%	70-130		
Surrogate: M5PFHxA	160				"	139.3		115%	70-130		
Surrogate: M4PFHpA	153				"	139.3		110%	70-130		
Surrogate: M3PFHxS	141				"	131.7		107%	70-130		
Surrogate: M3PFBs	162				"	129.4		125%	70-130		
Surrogate: M2PFTreA	71.6	Q			"	139.3		51.4%	70-130		
Surrogate: MPFDaA	133				"	139.3		95.5%	70-130		
Surrogate: MPFBA	170				"	139.3		122%	70-130		



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Phone:(312)353-8370 Fax:(312)886-2591

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Houston TX, 77099

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Batch B19E006 - * DEFAULT PREP *****

Duplicate (B19E006-DUP3)		Source: 1905002-35		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	17.2			45.0	ng/L		17.8			3.34	30
perfluoropentanoate	43.3			45.0	"		43.0			0.857	30
perfluorohexanoate	43.7			9.01	"		44.6			2.09	30
perfluoroheptanoate	18.5			9.01	"		17.6			5.16	30
perfluoroctanoate	12.0			9.01	"		9.00			28.7	30
perfluorononanoate	187	Q		9.01	"		1.50			197	30
perfluorodecanoate	U			9.01	"		U				30
perfluoroundecanoate	3.01			9.01	"		U				30
perfluorododecanoate	U			9.01	"		U				30
perfluorotridecanoate	U			9.01	"		U				30
perfluorotetradecanoate	1.09			9.01	"		1.26			15.1	30
perfluorobutyl sulfonate	10.5			9.01	"		9.57			9.39	30
perfluorohexyl sulfonate	15.3			9.01	"		14.5			5.59	30
perfluoroctyl sulfonate	46.2			9.01	"		48.1			3.96	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			9.01	"		U				30
perfluoro-1-pentanesulfonate (PFPeS)	2.88			9.01	"		3.64			23.5	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	497			9.01	"		463			7.18	30
perfluoro-1-heptanesulfonate (PFHpS)	U			9.01	"		U				30
perfluoro-1-octanesulfonamide (FOSA)	1.45			9.01	"		U				30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	3.59			9.01	"		4.29			17.9	30
perfluoro-1-nonanesulfonate (PFNS)	U			9.01	"		U				30
N-MeFOSAA	U			9.01	"		U				30
N-EtFOSAA	U			9.01	"		U				30
perfluoro-1-decanesulfonate (PFDS)	U			9.01	"		U				30
Surrogate: D5-N-EtFOSAA	137				"	128.2		107%	70-130		
Surrogate: D3-N-MeFOSAA	131				"	128.2		102%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	123				"	124.1		99.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	147				"	121.7		121%	70-130		



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Batch B19E006 - * DEFAULT PREP *****

Duplicate (B19E006-DUP3)		Source: 1905002-35		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:	127				ng/L	119.9		106%	70-130		
Surrogate: M9PFNA	140				"	128.2		109%	70-130		
Surrogate: M8PFOSA	125				"	128.2		97.1%	70-130		
Surrogate: M8PFOS	130				"	122.7		106%	70-130		
Surrogate: M8PFOA	147				"	128.2		114%	70-130		
Surrogate: M7PFUnA	127				"	128.2		98.9%	70-130		
Surrogate: M6PFDA	133				"	128.2		104%	70-130		
Surrogate: M5PFPeA	157				"	128.2		123%	70-130		
Surrogate: M5PFHxA	150				"	128.2		117%	70-130		
Surrogate: M4PFHpA	142				"	128.2		111%	70-130		
Surrogate: M3PFHxS	136				"	121.3		112%	70-130		
Surrogate: M3PFBS	148				"	119.1		124%	70-130		
Surrogate: M2PFTreA	26.4	Q			"	128.2		20.6%	70-130		
Surrogate: MPFDaA	114				"	128.2		88.6%	70-130		
Surrogate: MPFBA	160				"	128.2		125%	70-130		

MRL Check (B19E006-MRL1)

Prepared & Analyzed: May-06-19											
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	53.9			50.0	ng/L	50.00		108%	50-150		
perfluoropentanoate	52.4			50.0	"	50.00		105%	50-150		
perfluorohexanoate	9.29			10.0	"	10.00		92.9%	50-150		
perfluoroheptanoate	9.04			10.0	"	10.00		90.4%	50-150		
perfluorooctanoate	10.3			10.0	"	10.00		103%	50-150		
perfluorononanoate	8.74			10.0	"	10.00		87.4%	50-150		
perfluorodecanoate	8.68			10.0	"	10.00		86.8%	50-150		
perfluoroundecanoate	9.50			10.0	"	10.00		95.0%	50-150		
perfluorododecanoate	9.66			10.0	"	10.00		96.6%	50-150		
perfluorotridecanoate	9.36			10.0	"	10.00		93.6%	50-150		
perfluorotetradecanoate	11.0			10.0	"	10.00		110%	50-150		
perfluorobutyl sulfonate	9.75			10.0	"	10.00		97.5%	50-150		
perfluorohexyl sulfonate	8.40			10.0	"	10.00		84.0%	50-150		
perfluoroctyl sulfonate	6.33			10.0	"	10.00		63.3%	50-150		



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Batch B19E006 - *** DEFAULT PREP ***

MRL Check (B19E006-MRL1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	9.16			10.0	ng/L	10.00		91.6%	50-150		
perfluoro-1-pentanesulfonate (PFPeS)	9.40			10.0	"	10.00		94.0%	50-150		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	19.4	Q		10.0	"	10.00		194%	50-150		
perfluoro-1-heptanesulfonate (PFHpS)	9.79			10.0	"	10.00		97.9%	50-150		
perfluoro-1-octanesulfonamide (FOSA)	9.12			10.0	"	10.00		91.2%	50-150		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	10.2			10.0	"	10.00		102%	50-150		
perfluoro-1-nonanesulfonate (PFNS)	8.51			10.0	"	10.00		85.1%	50-150		
N-MeFOSAA	8.77			10.0	"	10.00		87.7%	50-150		
N-EtFOSAA	9.36			10.0	"	10.00		93.6%	50-150		
perfluoro-1-decanesulfonate (PFDS)	8.37			10.0	"	10.00		83.7%	50-150		
Surrogate: D5-N-EtFOSAA	160				"	160.0		100%	70-130		
Surrogate: D3-N-MeFOSAA	161				"	160.0		101%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	145				"	154.9		93.4%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	143				"	151.8		94.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	147				"	149.6		98.0%	70-130		
Surrogate: M9PFNA	155				"	160.0		97.2%	70-130		
Surrogate: M8PFOSA	142				"	160.0		89.0%	70-130		
Surrogate: M8PFOS	143				"	153.1		93.7%	70-130		
Surrogate: M8PFOA	163				"	160.0		102%	70-130		
Surrogate: M7PFUnA	157				"	160.0		98.1%	70-130		
Surrogate: M6PFDA	153				"	160.0		95.7%	70-130		
Surrogate: M5PFPeA	176				"	160.0		110%	70-130		
Surrogate: M5PFHxA	169				"	160.0		105%	70-130		
Surrogate: M4PFHpA	160				"	160.0		100%	70-130		
Surrogate: M3PFHxS	146				"	151.4		96.4%	70-130		
Surrogate: M3PFBs	160				"	148.6		108%	70-130		
Surrogate: M2PFTreA	153				"	160.0		95.4%	70-130		
Surrogate: MPFDaA	156				"	160.0		97.3%	70-130		
Surrogate: MPFBa	181				"	160.0		113%	70-130		



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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
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Batch B19E006 - *** DEFAULT PREP ***

MRL Check (B19E006-MRL2)

Prepared & Analyzed: May-06-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	55.6			50.0	ng/L	50.00		111%	50-150		
perfluoropentanoate	54.4			50.0	"	50.00		109%	50-150		
perfluorohexanoate	9.59			10.0	"	10.00		95.9%	50-150		
perfluoroheptanoate	10.2			10.0	"	10.00		102%	50-150		
perfluoroctanoate	11.2			10.0	"	10.00		112%	50-150		
perfluorononanoate	9.81			10.0	"	10.00		98.1%	50-150		
perfluorodecanoate	9.32			10.0	"	10.00		93.2%	50-150		
perfluoroundecanoate	9.48			10.0	"	10.00		94.8%	50-150		
perfluorododecanoate	10.2			10.0	"	10.00		102%	50-150		
perfluorotridecanoate	10.0			10.0	"	10.00		100%	50-150		
perfluorotetradecanoate	11.5			10.0	"	10.00		115%	50-150		
perfluorobutyl sulfonate	11.9			10.0	"	10.00		119%	50-150		
perfluorohexyl sulfonate	8.81			10.0	"	10.00		88.1%	50-150		
perfluoroctyl sulfonate	5.50			10.0	"	10.00		55.0%	50-150		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	10.8			10.0	"	10.00		108%	50-150		
perfluoro-1-pentanesulfonate (PFPeS)	10.0			10.0	"	10.00		100%	50-150		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	19.6	Q		10.0	"	10.00		196%	50-150		
perfluoro-1-heptanesulfonate (PFHpS)	10.0			10.0	"	10.00		100%	50-150		
perfluoro-1-octanesulfonamide (FOSA)	9.91			10.0	"	10.00		99.1%	50-150		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	9.10			10.0	"	10.00		91.0%	50-150		
perfluoro-1-nonanesulfonate (PFNS)	9.10			10.0	"	10.00		91.0%	50-150		
N-MeFOSAA	8.64			10.0	"	10.00		86.4%	50-150		
N-EtFOSAA	9.94			10.0	"	10.00		99.4%	50-150		
perfluoro-1-decanesulfonate (PFDS)	8.09			10.0	"	10.00		80.9%	50-150		
Surrogate: D5-N-EtFOSAA	163				"	160.0		102%	70-130		
Surrogate: D3-N-MeFOSAA	158				"	160.0		98.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	146				"	154.9		94.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	152				"	151.8		100%	70-130		



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10625 Fallstone Road
Houston TX, 77099

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Batch B19E006 - *** DEFAULT PREP ***

MRL Check (B19E006-MRL2)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit		Spike Level	Source Result	%REC Limits		RPD RPD	Limit
				Units				%REC	Limits		
Surrogate:	145			ng/L	149.6			97.0%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:				"	160.0			99.9%	70-130		
Surrogate: M9PFNA	160			"	160.0			101%	70-130		
Surrogate: M8PFOSA	145			"	160.0			90.4%	70-130		
Surrogate: M8PFOS	151			"	153.1			98.4%	70-130		
Surrogate: M8PFOA	170			"	160.0			106%	70-130		
Surrogate: M7PFUnA	161			"	160.0			101%	70-130		
Surrogate: M6PFDA	161			"	160.0			100%	70-130		
Surrogate: M5PFPeA	182			"	160.0			114%	70-130		
Surrogate: M5PFHxA	175			"	160.0			110%	70-130		
Surrogate: M4PFHpA	167			"	160.0			104%	70-130		
Surrogate: M3PFHxS	154			"	151.4			102%	70-130		
Surrogate: M3PFBS	163			"	148.6			110%	70-130		
Surrogate: M2PFTreA	161			"	160.0			101%	70-130		
Surrogate: MPFDaA	163			"	160.0			102%	70-130		
Surrogate: MPFBA	185			"	160.0			115%	70-130		

Matrix Spike (B19E006-MS1)

Source: 1905002-24 Prepared: May-06-19 Analyzed: May-07-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD RPD	Limit
perfluorobutanoate	713			43.5	ng/L	590.6	15.4	118%	70-130		
perfluoropentanoate	718			43.5	"	590.6	39.6	115%	70-130		
perfluorohexanoate	172			8.69	"	118.1	43.4	109%	70-130		
perfluoroheptanoate	138			8.69	"	118.1	15.5	104%	70-130		
perfluorooctanoate	131			8.69	"	118.1	9.03	103%	70-130		
perfluorononanoate	118			8.69	"	118.1	1.01	98.9%	70-130		
perfluorodecanoate	111			8.69	"	118.1	U	93.6%	70-130		
perfluoroundecanoate	104			8.69	"	118.1	U	88.1%	70-130		
perfluorododecanoate	89.1			8.69	"	118.1	U	75.4%	70-130		
perfluorotridecanoate	54.4	Q		8.69	"	118.1	U	46.0%	70-130		
perfluorotetradecanoate	10.0	Q		8.69	"	118.1	U	8.50%	70-130		
perfluorobutyl sulfonate	141			8.69	"	118.1	10.1	111%	70-130		
perfluorohexyl sulfonate	125			8.69	"	118.1	14.1	93.6%	70-130		
perfluoroctyl sulfonate	159			8.69	"	118.1	43.8	97.6%	70-130		



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Region 6, US EPA
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Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike (B19E006-MS1)		Source: 1905002-24		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	119			8.69	ng/L	118.1	1.47	99.8%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	132			8.69	"	118.1	2.91	110%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	609			8.69	"	118.1	466	121%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	116			8.69	"	118.1	U	97.9%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	104			8.69	"	118.1	U	87.7%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	114			8.69	"	118.1	4.24	92.8%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	99.5			8.69	"	118.1	U	84.3%	70-130		
N-MeFOSAA	108			8.69	"	118.1	U	91.8%	70-130		
N-EtFOSAA	109			8.69	"	118.1	U	92.3%	70-130		
perfluoro-1-decanesulfonate (PFDS)	88.1			8.69	"	118.1	U	74.6%	70-130		
Surrogate: D5-N-EtFOSAA	116				"	118.1		98.0%	70-130		
Surrogate: D3-N-MeFOSAA	112				"	118.1		94.4%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	109				"	114.3		95.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	138				"	112.1		123%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonateC13(2)-4:	120				"	110.4		108%	70-130		
Surrogate: M9PFNA	118				"	118.1		99.5%	70-130		
Surrogate: M8PFOSA	106				"	118.1		90.1%	70-130		
Surrogate: M8PFOS	105				"	113.0		93.0%	70-130		
Surrogate: M8PFOA	130				"	118.1		110%	70-130		
Surrogate: M7PFUnA	108				"	118.1		91.8%	70-130		
Surrogate: M6PFDA	115				"	118.1		97.3%	70-130		
Surrogate: M5PFPeA	139				"	118.1		117%	70-130		
Surrogate: M5PFHxA	132				"	118.1		112%	70-130		
Surrogate: M4PFHpA	125				"	118.1		105%	70-130		
Surrogate: M3PFHxS	120				"	111.7		107%	70-130		
Surrogate: M3PFBs	137				"	109.7		125%	70-130		
Surrogate: M2PFTreA	9.60	Q			"	118.1		8.13%	70-130		
Surrogate: MPFDaA	89.2				"	118.1		75.5%	70-130		
Surrogate: MPFBa	142				"	118.1		120%	70-130		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - * DEFAULT PREP *****

Matrix Spike (B19E006-MS2)		Source: 1905002-30		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	629			41.1	ng/L	516.3	16.2	119%	70-130		
perfluoropentanoate	633			41.1	"	516.3	37.4	115%	70-130		
perfluorohexanoate	149			8.23	"	103.3	30.5	115%	70-130		
perfluoroheptanoate	120			8.23	"	103.3	11.8	104%	70-130		
perfluoroctanoate	114			8.23	"	103.3	6.79	103%	70-130		
perfluorononanoate	105			8.23	"	103.3	10.4	91.4%	70-130		
perfluorodecanoate	95.4			8.23	"	103.3	U	92.4%	70-130		
perfluoroundecanoate	86.5			8.23	"	103.3	U	83.8%	70-130		
perfluorododecanoate	67.8	Q		8.23	"	103.3	U	65.6%	70-130		
perfluorotridecanoate	25.2	Q		8.23	"	103.3	U	24.4%	70-130		
perfluorotetradecanoate	2.41	Q		8.23	"	103.3	U	2.33%	70-130		
perfluorobutyl sulfonate	123			8.23	"	103.3	7.83	112%	70-130		
perfluorohexyl sulfonate	113			8.23	"	103.3	8.16	101%	70-130		
perfluoroctyl sulfonate	124			8.23	"	103.3	32.4	88.9%	70-130		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	116			8.23	"	103.3	U	112%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	117			8.23	"	103.3	2.12	111%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	430			8.23	"	103.3	321	106%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	105			8.23	"	103.3	U	102%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	89.6			8.23	"	103.3	1.41	85.4%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	97.7			8.23	"	103.3	2.24	92.4%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	85.0			8.23	"	103.3	U	82.4%	70-130		
N-MeFOSAA	95.2			8.23	"	103.3	U	92.2%	70-130		
N-EtFOSAA	94.0			8.23	"	103.3	U	91.1%	70-130		
perfluoro-1-decanesulfonate (PFDS)	66.9	Q		8.23	"	103.3	U	64.8%	70-130		
Surrogate: D5-N-EtFOSAA	95.4				"	103.3		92.4%	70-130		
Surrogate: D3-N-MeFOSAA	98.6				"	103.3		95.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	104				"	99.96		104%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	125				"	97.99		127%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike (B19E006-MS2)		Source: 1905002-30		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate:	108				ng/L	96.55		112%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	103.3		103%	70-130		
Surrogate: M9PFNA	107				"	103.3		103%	70-130		
Surrogate: M8PFOSA	93.4				"	103.3		90.5%	70-130		
Surrogate: M8PFOS	100				"	98.82		102%	70-130		
Surrogate: M8PFOA	116				"	103.3		112%	70-130		
Surrogate: M7PFUnA	91.5				"	103.3		88.6%	70-130		
Surrogate: M6PFDA	101				"	103.3		97.5%	70-130		
Surrogate: M5PFPeA	125				"	103.3		121%	70-130		
Surrogate: M5PFHxA	116				"	103.3		112%	70-130		
Surrogate: M4PFHpA	110				"	103.3		107%	70-130		
Surrogate: M3PFHxS	104				"	97.68		107%	70-130		
Surrogate: M3PFBS	114				"	95.93		119%	70-130		
Surrogate: M2PFTreA	2.54	Q			"	103.3		2.46%	70-130		
Surrogate: MPFDaA	69.6	Q			"	103.3		67.4%	70-130		
Surrogate: MPFBA	125				"	103.3		121%	70-130		

Matrix Spike (B19E006-MS3)		Source: 1905002-35		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	679			42.4	ng/L	555.3	17.8	119%	70-130		
perfluoropentanoate	688			42.4	"	555.3	43.0	116%	70-130		
perfluorohexanoate	166			8.47	"	111.1	44.6	109%	70-130		
perfluoroheptanoate	134			8.47	"	111.1	17.6	105%	70-130		
perfluoroctanoate	124			8.47	"	111.1	9.00	103%	70-130		
perfluorononanoate	116			8.47	"	111.1	1.50	103%	70-130		
perfluorodecanoate	106			8.47	"	111.1	U	95.2%	70-130		
perfluoroundecanoate	97.0			8.47	"	111.1	U	87.4%	70-130		
perfluorododecanoate	79.3			8.47	"	111.1	U	71.4%	70-130		
perfluorotridecanoate	33.0	Q		8.47	"	111.1	U	29.7%	70-130		
perfluorotetradecanoate	2.49	Q		8.47	"	111.1	1.26	1.10%	70-130		
perfluorobutyl sulfonate	132			8.47	"	111.1	9.57	111%	70-130		
perfluorohexyl sulfonate	139			8.47	"	111.1	14.5	112%	70-130		
perfluoroctyl sulfonate	157			8.47	"	111.1	48.1	98.3%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

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Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike (B19E006-MS3)		Source: 1905002-35		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	116			8.47	ng/L	111.1	1.30	104%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	127			8.47	"	111.1	3.64	111%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	596			8.47	"	111.1	463	120%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	117			8.47	"	111.1	U	105%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	98.7			8.47	"	111.1	1.41	87.6%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	111			8.47	"	111.1	4.29	96.0%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	92.1			8.47	"	111.1	U	83.0%	70-130		
N-MeFOSAA	104			8.47	"	111.1	U	93.4%	70-130		
N-EtFOSAA	104			8.47	"	111.1	U	93.5%	70-130		
perfluoro-1-decanesulfonate (PFDS)	68.9	Q		8.47	"	111.1	U	62.1%	70-130		
Surrogate: D5-N-EtFOSAA	112				"	111.1		101%	70-130		
Surrogate: D3-N-MeFOSAA	115				"	111.1		104%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	107				"	107.5		99.6%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	141	Q			"	105.4		134%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	121				"	103.8		117%	70-130		
Surrogate: M9PFNA	122				"	111.1		110%	70-130		
Surrogate: M8PFOSA	105				"	111.1		94.4%	70-130		
Surrogate: M8PFOS	109				"	106.3		103%	70-130		
Surrogate: M8PFOA	126				"	111.1		113%	70-130		
Surrogate: M7PFUnA	104				"	111.1		93.5%	70-130		
Surrogate: M6PFDA	111				"	111.1		99.6%	70-130		
Surrogate: M5PFPeA	136				"	111.1		123%	70-130		
Surrogate: M5PFHxA	128				"	111.1		115%	70-130		
Surrogate: M4PFHpA	124				"	111.1		111%	70-130		
Surrogate: M3PFHxS	118				"	105.1		112%	70-130		
Surrogate: M3PFBs	132				"	103.2		128%	70-130		
Surrogate: M2PFTreA	3.02	Q			"	111.1		2.72%	70-130		
Surrogate: MPFDaA	82.2				"	111.1		74.0%	70-130		
Surrogate: MPFBA	139				"	111.1		125%	70-130		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control
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Batch B19E006 - * DEFAULT PREP *****

Matrix Spike Dup (B19E006-MSD1)		Source: 1905002-24		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	692			42.3	ng/L	554.9	15.4	122%	70-130	3.11	30
perfluoropentanoate	688			42.3	"	554.9	39.6	117%	70-130	4.28	30
perfluorohexanoate	166			8.47	"	111.0	43.4	110%	70-130	3.67	30
perfluoroheptanoate	130			8.47	"	111.0	15.5	103%	70-130	5.95	30
perfluoroctanoate	124			8.47	"	111.0	9.03	104%	70-130	5.15	30
perfluorononanoate	113			8.47	"	111.0	1.01	101%	70-130	4.29	30
perfluorodecanoate	103			8.47	"	111.0	U	92.9%	70-130	6.97	30
perfluoroundecanoate	96.4			8.47	"	111.0	U	86.9%	70-130	7.58	30
perfluorododecanoate	77.7			8.47	"	111.0	U	70.0%	70-130	13.6	30
perfluorotridecanoate	35.9	Q		8.47	"	111.0	U	32.4%	70-130	40.8	30
perfluorotetradecanoate	4.37	Q		8.47	"	111.0	1.04	3.00%	70-130	78.7	30
perfluorobutyl sulfonate	131			8.47	"	111.0	10.1	109%	70-130	7.51	30
perfluorohexyl sulfonate	122			8.47	"	111.0	14.1	96.8%	70-130	2.55	30
perfluoroctyl sulfonate	140			8.47	"	111.0	43.8	86.3%	70-130	13.0	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	120			8.47	"	111.0	1.47	107%	70-130	0.258	30
perfluoro-1-pentanesulfonate (PFPeS)	127			8.47	"	111.0	2.91	112%	70-130	4.32	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	557			8.47	"	111.0	466	82.6%	70-130	8.83	30
perfluoro-1-heptanesulfonate (PFHpS)	114			8.47	"	111.0	U	103%	70-130	1.31	30
perfluoro-1-octanesulfonamide (FOSA)	101			8.47	"	111.0	U	91.0%	70-130	2.45	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	106			8.47	"	111.0	4.24	92.0%	70-130	6.87	30
perfluoro-1-nonanesulfonate (PFNS)	92.3			8.47	"	111.0	U	83.2%	70-130	7.55	30
N-MeFOSAA	98.7			8.47	"	111.0	U	88.9%	70-130	9.42	30
N-EtFOSAA	105			8.47	"	111.0	U	94.8%	70-130	3.60	30
perfluoro-1-decanesulfonate (PFDS)	69.0	Q		8.47	"	111.0	U	62.2%	70-130	24.4	30
Surrogate: D5-N-EtFOSAA	103				"	111.0		92.4%	70-130		
Surrogate: D3-N-MeFOSAA	106				"	111.0		95.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	105				"	107.4		97.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	132				"	105.3		125%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike Dup (B19E006-MSD1)		Source: 1905002-24		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate:	111				ng/L	103.8		107%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	111.0		102%	70-130		
Surrogate: M9PFNA	113				"	111.0		102%	70-130		
Surrogate: M8PFOSA	100				"	111.0		90.3%	70-130		
Surrogate: M8PFOS	99.6				"	106.2		93.8%	70-130		
Surrogate: M8PFOA	121				"	111.0		109%	70-130		
Surrogate: M7PFUnA	98.6				"	111.0		88.9%	70-130		
Surrogate: M6PFDA	108				"	111.0		97.5%	70-130		
Surrogate: M5PFPeA	136				"	111.0		123%	70-130		
Surrogate: M5PFHxA	126				"	111.0		113%	70-130		
Surrogate: M4PFHpA	122				"	111.0		110%	70-130		
Surrogate: M3PFHxS	108				"	105.0		103%	70-130		
Surrogate: M3PFBS	121				"	103.1		118%	70-130		
Surrogate: M2PFTreA	4.72	Q			"	111.0		4.26%	70-130		
Surrogate: MPFDaA	77.8				"	111.0		70.1%	70-130		
Surrogate: MPFBA	139				"	111.0		126%	70-130		

Matrix Spike Dup (B19E006-MSD2)		Source: 1905002-30		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	700			43.0	ng/L	575.5	16.2	119%	70-130	10.7	30
perfluoropentanoate	706			43.0	"	575.5	37.4	116%	70-130	10.8	30
perfluorohexanoate	161			8.60	"	115.1	30.5	114%	70-130	7.72	30
perfluoroheptanoate	134			8.60	"	115.1	11.8	106%	70-130	11.3	30
perfluoroctanoate	130			8.60	"	115.1	6.79	107%	70-130	13.6	30
perfluorononanoate	163	Q		8.60	"	115.1	10.4	132%	70-130	43.2	30
perfluorodecanoate	111			8.60	"	115.1	U	96.2%	70-130	14.9	30
perfluoroundecanoate	106			8.60	"	115.1	U	92.4%	70-130	20.6	30
perfluorododecanoate	94.5	Q		8.60	"	115.1	U	82.1%	70-130	32.9	30
perfluorotridecanoate	60.2	Q		8.60	"	115.1	U	52.3%	70-130	81.9	30
perfluorotetradecanoate	12.9	Q		8.60	"	115.1	U	11.3%	70-130	137	30
perfluorobutyl sulfonate	131			8.60	"	115.1	7.83	107%	70-130	5.89	30
perfluorohexyl sulfonate	122			8.60	"	115.1	8.16	98.6%	70-130	7.69	30
perfluoroctyl sulfonate	165			8.60	"	115.1	32.4	115%	70-130	28.0	30



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike Dup (B19E006-MSD2)		Source: 1905002-30		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	123			8.60	ng/L	115.1	U	107%	70-130	5.71	30
perfluoro-1-pentanesulfonate (PFPeS)	127			8.60	"	115.1	2.12	108%	70-130	7.98	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	447			8.60	"	115.1	321	110%	70-130	3.92	30
perfluoro-1-heptanesulfonate (PFHpS)	119			8.60	"	115.1	U	103%	70-130	12.1	30
perfluoro-1-octanesulfonamide (FOSA)	105			8.60	"	115.1	1.41	89.9%	70-130	15.8	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	116			8.60	"	115.1	U	101%	70-130	17.0	30
perfluoro-1-nonanesulfonate (PFNS)	105			8.60	"	115.1	U	91.0%	70-130	20.8	30
N-MeFOSAA	113			8.60	"	115.1	U	97.9%	70-130	16.8	30
N-EtFOSAA	114			8.60	"	115.1	U	98.9%	70-130	19.0	30
perfluoro-1-decanesulfonate (PFDS)	90.2			8.60	"	115.1	U	78.3%	70-130	29.7	30
Surrogate: D5-N-EtFOSAA	112				"	115.1		97.6%	70-130		
Surrogate: D3-N-MeFOSAA	111				"	115.1		96.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	116				"	111.4		104%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	140				"	109.2		128%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonateC13(2)-4:	126				"	107.6		117%	70-130		
Surrogate: M9PFNA	125				"	115.1		109%	70-130		
Surrogate: M8PFOSA	109				"	115.1		94.6%	70-130		
Surrogate: M8PFOS	109				"	110.2		99.2%	70-130		
Surrogate: M8PFOA	130				"	115.1		113%	70-130		
Surrogate: M7PFUnA	113				"	115.1		98.0%	70-130		
Surrogate: M6PFDA	117				"	115.1		101%	70-130		
Surrogate: M5PFPeA	143				"	115.1		124%	70-130		
Surrogate: M5PFHxA	136				"	115.1		118%	70-130		
Surrogate: M4PFHpA	128				"	115.1		111%	70-130		
Surrogate: M3PFHxS	122				"	108.9		112%	70-130		
Surrogate: M3PFBs	136				"	106.9		127%	70-130		
Surrogate: M2PFTreA	13.7	Q			"	115.1		11.9%	70-130		
Surrogate: MPFDaA	96.7				"	115.1		84.0%	70-130		
Surrogate: MPFBA	143				"	115.1		124%	70-130		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - * DEFAULT PREP *****

Matrix Spike Dup (B19E006-MSD3)		Source: 1905002-35		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	681			42.0	ng/L	545.4	17.8	122%	70-130	0.271	30
perfluoropentanoate	693			42.0	"	545.4	43.0	119%	70-130	0.672	30
perfluorohexanoate	167			8.41	"	109.1	44.6	112%	70-130	0.836	30
perfluoroheptanoate	135			8.41	"	109.1	17.6	108%	70-130	0.710	30
perfluoroctanoate	129			8.41	"	109.1	9.00	110%	70-130	3.88	30
perfluorononanoate	118			8.41	"	109.1	1.50	107%	70-130	1.98	30
perfluorodecanoate	105			8.41	"	109.1	U	96.2%	70-130	0.671	30
perfluoroundecanoate	95.9			8.41	"	109.1	U	87.9%	70-130	1.14	30
perfluorododecanoate	71.1	Q		8.41	"	109.1	U	65.2%	70-130	10.9	30
perfluorotridecanoate	24.1	Q		8.41	"	109.1	U	22.1%	70-130	31.3	30
perfluorotetradecanoate	1.76	Q		8.41	"	109.1	1.26	0.454%	70-130	34.3	30
perfluorobutyl sulfonate	136			8.41	"	109.1	9.57	116%	70-130	2.60	30
perfluorohexyl sulfonate	124			8.41	"	109.1	14.5	101%	70-130	11.0	30
perfluoroctyl sulfonate	161			8.41	"	109.1	48.1	104%	70-130	2.62	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTs)	119			8.41	"	109.1	1.30	108%	70-130	2.08	30
perfluoro-1-pentanesulfonate (PFPeS)	131			8.41	"	109.1	3.64	116%	70-130	2.83	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTs)	604			8.41	"	109.1	463	130%	70-130	1.44	30
perfluoro-1-heptanesulfonate (PFHpS)	116			8.41	"	109.1	U	106%	70-130	0.912	30
perfluoro-1-octanesulfonamide (FOSA)	98.5			8.41	"	109.1	1.41	89.0%	70-130	0.246	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTs)	112			8.41	"	109.1	4.29	98.7%	70-130	0.913	30
perfluoro-1-nonanesulfonate (PFNS)	93.1			8.41	"	109.1	U	85.4%	70-130	1.05	30
N-MeFOSAA	103			8.41	"	109.1	U	94.0%	70-130	1.16	30
N-EtFOSAA	101			8.41	"	109.1	U	93.0%	70-130	2.35	30
perfluoro-1-decanesulfonate (PFDS)	68.0	Q		8.41	"	109.1	U	62.3%	70-130	1.41	30
Surrogate: D5-N-EtFOSAA	108				"	109.1		99.3%	70-130		
Surrogate: D3-N-MeFOSAA	111				"	109.1		102%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTs	109				"	105.6		104%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTs	136	Q			"	103.5		131%	70-130		



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E006 - *** DEFAULT PREP ***

Matrix Spike Dup (B19E006-MSD3)		Source: 1905002-35		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:	117				ng/L	102.0		115%	70-130		
Surrogate: M9PFNA	118				"	109.1		108%	70-130		
Surrogate: M8PFOSA	102				"	109.1		93.8%	70-130		
Surrogate: M8PFOS	102				"	104.4		97.5%	70-130		
Surrogate: M8PFOA	125				"	109.1		115%	70-130		
Surrogate: M7PFUnA	98.1				"	109.1		90.0%	70-130		
Surrogate: M6PFDA	111				"	109.1		102%	70-130		
Surrogate: M5PFPeA	133				"	109.1		122%	70-130		
Surrogate: M5PFHxA	121				"	109.1		111%	70-130		
Surrogate: M4PFHpA	120				"	109.1		110%	70-130		
Surrogate: M3PFHxS	112				"	103.2		108%	70-130		
Surrogate: M3PFBS	122				"	101.3		121%	70-130		
Surrogate: M2PFTreA	2.24	Q			"	109.1		2.05%	70-130		
Surrogate: MPFDoA	73.0	Q			"	109.1		66.9%	70-130		
Surrogate: MPFBA	135				"	109.1		124%	70-130		

Batch B19E007 - *** DEFAULT PREP ***

Blank (B19E007-BLK1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	U			50.0	ng/L						
perfluoropentanoate	U			50.0	"						
perfluorohexanoate	U			10.0	"						
perfluoroheptanoate	U			10.0	"						
perfluoroctanoate	U			10.0	"						
perfluorononanoate	U			10.0	"						
perfluorodecanoate	U			10.0	"						
perfluoroundecanoate	U			10.0	"						
perfluorododecanoate	U			10.0	"						
perfluorotridecanoate	U			10.0	"						
perfluorotetradecanoate	U			10.0	"						
perfluorobutyl sulfonate	U			10.0	"						
perfluorohexyl sulfonate	U			10.0	"						



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
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Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

Blank (B19E007-BLK1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluoroctyl sulfonate	U			10.0	ng/L	"					
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			10.0	"	"					
perfluoro-1-pentanesulfonate (PFPeS)	U			10.0	"	"					
1H,1H,2H,2H-perfluoroctane sulfonate (6:2 FTS)	U			10.0	"	"					
perfluoro-1-heptanesulfonate (PFHpS)	U			10.0	"	"					
perfluoro-1-octanesulfonamide (FOSA)	U			10.0	"	"					
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			10.0	"	"					
perfluoro-1-nonanesulfonate (PFNS)	U			10.0	"	"					
N-MeFOSAA	U			10.0	"	"					
N-EtFOSAA	U			10.0	"	"					
perfluoro-1-decanesulfonate (PFDS)	U			10.0	"	"					
Surrogate: D5-N-EtFOSAA	151				"	160.0	94.1%	70-130			
Surrogate: D3-N-MeFOSAA	151				"	160.0	94.2%	70-130			
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	143				"	154.9	92.3%	70-130			
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	140				"	151.8	92.4%	70-130			
Surrogate:	130				"	149.6	86.7%	70-130			
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:											
Surrogate: M9PFNA	149				"	160.0	93.4%	70-130			
Surrogate: M8PFOSA	153				"	160.0	95.5%	70-130			
Surrogate: M8PFOS	144				"	153.1	94.3%	70-130			
Surrogate: M8PFOA	146				"	160.0	91.2%	70-130			
Surrogate: M7PFUnA	148				"	160.0	92.3%	70-130			
Surrogate: M6PFDA	148				"	160.0	92.8%	70-130			
Surrogate: M5PFPeA	149				"	160.0	92.9%	70-130			
Surrogate: M5PFHxA	149				"	160.0	93.4%	70-130			
Surrogate: M4PFHpA	146				"	160.0	91.3%	70-130			
Surrogate: M3PFHxS	142				"	151.4	93.7%	70-130			
Surrogate: M3PFBS	134				"	148.6	90.4%	70-130			
Surrogate: M2PFTreA	141				"	160.0	88.0%	70-130			
Surrogate: MPFDoA	145				"	160.0	90.6%	70-130			



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Batch B19E007 - * DEFAULT PREP *****

Blank (B19E007-BLK1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: MPFBA	150				ng/L	160.0		93.5%	70-130		

Blank (B19E007-BLK2)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	U			50.0	ng/L						
perfluoropentanoate	U			50.0	"						
perfluorohexanoate	U			10.0	"						
perfluoroheptanoate	U			10.0	"						
perfluoroctanoate	U			10.0	"						
perfluorononanoate	U			10.0	"						
perfluorodecanoate	U			10.0	"						
perfluoroundecanoate	U			10.0	"						
perfluorododecanoate	U			10.0	"						
perfluorotridecanoate	U			10.0	"						
perfluorotetradecanoate	U			10.0	"						
perfluorobutyl sulfonate	U			10.0	"						
perfluorohexyl sulfonate	U			10.0	"						
perfluoroctyl sulfonate	U			10.0	"						
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	U			10.0	"						
perfluoro-1-pentanesulfonate (PFPeS)	U			10.0	"						
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	U			10.0	"						
perfluoro-1-heptanesulfonate (PFHpS)	U			10.0	"						
perfluoro-1-octanesulfonamide (FOSA)	U			10.0	"						
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	U			10.0	"						
perfluoro-1-nonanesulfonate (PFNS)	U			10.0	"						
N-MeFOSAA	U			10.0	"						
N-EtFOSAA	U			10.0	"						
perfluoro-1-decanesulfonate (PFDS)	U			10.0	"						



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10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
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Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

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Batch B19E007 - *** DEFAULT PREP ***

Blank (B19E007-BLK2)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: D5-N-EtFOSAA	156				ng/L	160.0		97.6%	70-130		
Surrogate: D3-N-MeFOSAA	152				"	160.0		95.2%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	153				"	154.9		98.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	145				"	151.8		95.4%	70-130		
Surrogate: perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:	132				"	149.6		88.2%	70-130		
Surrogate: M9PFNA	152				"	160.0		95.1%	70-130		
Surrogate: M8PFOSA	155				"	160.0		96.7%	70-130		
Surrogate: M8PFOS	142				"	153.1		92.9%	70-130		
Surrogate: M8PFOA	150				"	160.0		93.7%	70-130		
Surrogate: M7PFUnA	153				"	160.0		95.8%	70-130		
Surrogate: M6PFDA	153				"	160.0		95.9%	70-130		
Surrogate: M5PFPeA	151				"	160.0		94.5%	70-130		
Surrogate: M5PFHxA	154				"	160.0		96.2%	70-130		
Surrogate: M4PFHpA	147				"	160.0		92.2%	70-130		
Surrogate: M3PFHxS	145				"	151.4		95.5%	70-130		
Surrogate: M3PFBS	138				"	148.6		92.7%	70-130		
Surrogate: M2PFTreA	150				"	160.0		93.5%	70-130		
Surrogate: MPFDaA	151				"	160.0		94.6%	70-130		
Surrogate: MPFBA	154				"	160.0		96.1%	70-130		

LCS (B19E007-BS1) Prepared: May-06-19 Analyzed: May-07-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	758			50.0	ng/L	800.0		94.7%	70-130		
perfluoropentanoate	760			50.0	"	800.0		95.0%	70-130		
perfluorohexanoate	154			10.0	"	160.0		96.0%	70-130		
perfluoroheptanoate	153			10.0	"	160.0		95.5%	70-130		
perfluoroctanoate	156			10.0	"	160.0		97.4%	70-130		
perfluorononanoate	155			10.0	"	160.0		97.0%	70-130		
perfluorodecanoate	156			10.0	"	160.0		97.8%	70-130		
perfluoroundecanoate	158			10.0	"	160.0		98.7%	70-130		
perfluorododecanoate	159			10.0	"	160.0		99.5%	70-130		



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Reported:
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Analysis by LC MS MS - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - * DEFAULT PREP *****

LCS (B19E007-BS1)		Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorotridecanoate	162			10.0	ng/L	160.0		101%	70-130		
perfluorotetradecanoate	158			10.0	"	160.0		98.9%	70-130		
perfluorobutyl sulfonate	153			10.0	"	160.0		95.5%	70-130		
perfluorohexyl sulfonate	159			10.0	"	160.0		99.6%	70-130		
perfluoroctyl sulfonate	156			10.0	"	160.0		97.5%	70-130		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	158			10.0	"	160.0		98.9%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	157			10.0	"	160.0		98.0%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	152			10.0	"	160.0		95.1%	70-130		
perfluoro-1-heptanesulfonate (PFHps)	160			10.0	"	160.0		100%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	161			10.0	"	160.0		101%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	185			10.0	"	160.0		116%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	159			10.0	"	160.0		99.2%	70-130		
N-MeFOSAA	162			10.0	"	160.0		101%	70-130		
N-EtFOSAA	160			10.0	"	160.0		100%	70-130		
perfluoro-1-decanesulfonate (PFDS)	161			10.0	"	160.0		100%	70-130		
Surrogate: D5-N-EtFOSAA	159				"	160.0		99.6%	70-130		
Surrogate: D3-N-MeFOSAA	157				"	160.0		97.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	173				"	154.9		112%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	155				"	151.8		102%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonate C13(2)-4:	141				"	149.6		94.1%	70-130		
Surrogate: M9PFNA	156				"	160.0		97.6%	70-130		
Surrogate: M8PFOSA	161				"	160.0		101%	70-130		
Surrogate: M8PFOS	149				"	153.1		97.6%	70-130		
Surrogate: M8PFOA	150				"	160.0		94.0%	70-130		
Surrogate: M7PFUnA	157				"	160.0		98.3%	70-130		
Surrogate: M6PFDA	158				"	160.0		98.5%	70-130		
Surrogate: M5PFPeA	152				"	160.0		94.7%	70-130		
Surrogate: M5PFHxA	149				"	160.0		93.4%	70-130		



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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

LCS (B19E007-BS1)		Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: M4PFHpA	149				ng/L	160.0		93.2%	70-130		
Surrogate: M3PFHxS	149				"	151.4		98.5%	70-130		
Surrogate: M3PFBS	136				"	148.6		91.8%	70-130		
Surrogate: M2PFTreA	157				"	160.0		98.2%	70-130		
Surrogate: MPFDoA	157				"	160.0		98.1%	70-130		
Surrogate: MPFBA	155				"	160.0		97.0%	70-130		

LCS Dup (B19E007-BSD1)

		Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	738			50.0	ng/L	800.0		92.2%	70-130	2.66	30
perfluoropentanoate	741			50.0	"	800.0		92.6%	70-130	2.57	30
perfluorohexanoate	151			10.0	"	160.0		94.2%	70-130	1.89	30
perfluoroheptanoate	148			10.0	"	160.0		92.5%	70-130	3.17	30
perfluoroctanoate	151			10.0	"	160.0		94.2%	70-130	3.34	30
perfluorononanoate	150			10.0	"	160.0		93.5%	70-130	3.65	30
perfluorodecanoate	149			10.0	"	160.0		93.1%	70-130	4.88	30
perfluoroundecanoate	149			10.0	"	160.0		93.2%	70-130	5.65	30
perfluorododecanoate	151			10.0	"	160.0		94.3%	70-130	5.30	30
perfluorotridecanoate	151			10.0	"	160.0		94.1%	70-130	7.46	30
perfluorotetradecanoate	151			10.0	"	160.0		94.6%	70-130	4.35	30
perfluorobutyl sulfonate	147			10.0	"	160.0		92.1%	70-130	3.55	30
perfluorohexyl sulfonate	150			10.0	"	160.0		93.7%	70-130	6.04	30
perfluoroctyl sulfonate	155			10.0	"	160.0		96.7%	70-130	0.893	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	147			10.0	"	160.0		91.7%	70-130	7.58	30
perfluoro-1-pentanesulfonate (PFPeS)	144			10.0	"	160.0		90.2%	70-130	8.26	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	133			10.0	"	160.0		83.1%	70-130	13.5	30
perfluoro-1-heptanesulfonate (PFHpS)	147			10.0	"	160.0		92.1%	70-130	8.49	30
perfluoro-1-octanesulfonamide (FOSA)	151			10.0	"	160.0		94.1%	70-130	6.76	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	152			10.0	"	160.0		95.0%	70-130	19.7	30



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

LCS Dup (B19E007-BSD1)		Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluoro-1-nananesulfonate (PFNS)	148			10.0	ng/L	160.0		92.7%	70-130	6.73	30
N-MeFOSAA	149			10.0	"	160.0		93.3%	70-130	8.31	30
N-EtFOSAA	151			10.0	"	160.0		94.5%	70-130	5.63	30
perfluoro-1-decanesulfonate (PFDS)	153			10.0	"	160.0		95.9%	70-130	4.60	30
Surrogate: D5-N-EtFOSAA	143				"	160.0		89.6%	70-130		
Surrogate: D3-N-MeFOSAA	144				"	160.0		90.1%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	138				"	154.9		89.0%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	138				"	151.8		91.1%	70-130		
Surrogate:	128				"	149.6		85.6%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	160.0		89.5%	70-130		
Surrogate: M9PFNA	143				"	160.0		89.4%	70-130		
Surrogate: M8PFOSA	143				"	160.0		89.4%	70-130		
Surrogate: M8PFOS	144				"	153.1		93.8%	70-130		
Surrogate: M8PFOA	137				"	160.0		85.4%	70-130		
Surrogate: M7PFUa	142				"	160.0		88.8%	70-130		
Surrogate: M6PFDA	145				"	160.0		90.9%	70-130		
Surrogate: M5PPPeA	139				"	160.0		86.8%	70-130		
Surrogate: M5PFHxA	144				"	160.0		89.8%	70-130		
Surrogate: M4PFHpA	141				"	160.0		88.4%	70-130		
Surrogate: M3PFHxS	138				"	151.4		91.1%	70-130		
Surrogate: M3PFBs	126				"	148.6		84.6%	70-130		
Surrogate: M2PFTreA	142				"	160.0		88.7%	70-130		
Surrogate: MPFDaA	144				"	160.0		89.7%	70-130		
Surrogate: MPFBa	139				"	160.0		86.8%	70-130		

Duplicate (B19E007-DUP1)		Source: 1905003-02 Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	15.6			47.1	ng/L		17.8			13.0	30
perfluoropentanoate	37.9			47.1	"		47.3			22.1	30
perfluorohexanoate	33.7			9.42	"		35.2			4.37	30
perfluoroheptanoate	14.9			9.42	"		14.3			4.57	30
perfluoroctanoate	11.1			9.42	"		11.6			4.28	30



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
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Project Manager: Matthew Loesel

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Batch B19E007 - *** DEFAULT PREP ***

Duplicate (B19E007-DUP1)		Source: 1905003-02		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorononanoate	5.25	Q		9.42	ng/L		3.18			49.1	30
perfluorodecanoate	4.18	Q		9.42	"		2.99			33.2	30
perfluoroundecanoate	1.47			9.42	"		1.59			7.80	30
perfluorododecanoate	2.06			9.42	"		1.82			12.4	30
perfluorotridecanoate	1.71			9.42	"		1.47			14.9	30
perfluorotetradecanoate	2.12			9.42	"		2.18			2.90	30
perfluorobutyl sulfonate	11.2			9.42	"		12.0			7.43	30
perfluorohexyl sulfonate	13.7			9.42	"		13.4			2.88	30
perfluoroctyl sulfonate	43.1			9.42	"		41.9			2.84	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	1.46			9.42	"		1.65			12.2	30
perfluoro-1-pentanesulfonate (PFPeS)	5.20			9.42	"		4.32			18.4	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	318			9.42	"		326			2.51	30
perfluoro-1-heptanesulfonate (PFHpS)	U			9.42	"		U				30
perfluoro-1-octanesulfonamide (FOSA)	1.88			9.42	"		1.83			2.49	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	5.31			9.42	"		5.12			3.59	30
perfluoro-1-nonanesulfonate (PFNS)	1.80			9.42	"		1.59			12.1	30
N-MeFOSAA	U			9.42	"		U				30
N-EtFOSAA	2.05			9.42	"		1.71			17.8	30
perfluoro-1-decanesulfonate (PFDS)	2.43			9.42	"		2.16			11.7	30
Surrogate: D5-N-EtFOSAA	120				"	141.3		84.9%	70-130		
Surrogate: D3-N-MeFOSAA	119				"	141.3		84.2%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	111				"	136.8		80.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	122				"	134.1		90.6%	70-130		
Surrogate: perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:	98.0				"	132.1		74.1%	70-130		
Surrogate: M9PFNA	128				"	141.3		90.4%	70-130		
Surrogate: M8PFOSA	130				"	141.3		92.3%	70-130		
Surrogate: M8PFOS	132				"	135.2		97.3%	70-130		
Surrogate: M8PFOA	130				"	141.3		92.2%	70-130		



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
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Project Manager: Matthew Loesel

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Batch B19E007 - *** DEFAULT PREP ***

Duplicate (B19E007-DUP1)		Source: 1905003-02		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: M7PFUnA	124				ng/L	141.3		87.9%	70-130		
Surrogate: M6PFDA	129				"	141.3		91.1%	70-130		
Surrogate: M5PFPeA	127				"	141.3		90.1%	70-130		
Surrogate: M5PFHxA	129				"	141.3		91.2%	70-130		
Surrogate: M4PFHpaA	125				"	141.3		88.7%	70-130		
Surrogate: M3PFHxS	130				"	133.7		97.6%	70-130		
Surrogate: M3PFBS	119				"	131.3		90.5%	70-130		
Surrogate: M2PFTreA	58.0	Q			"	141.3		41.1%	70-130		
Surrogate: MPFDoA	113				"	141.3		80.3%	70-130		
Surrogate: MPFBa	147				"	141.3		104%	70-130		

Duplicate (B19E007-DUP2)		Source: 1905005-01		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	32.2	Q		42.5	ng/L		17.5		59.3	30	
perfluoropentanoate	33.9			42.5	"		44.0		25.9	30	
perfluorohexanoate	33.7			8.50	"		34.2		1.41	30	
perfluoroheptanoate	15.3			8.50	"		16.0		4.64	30	
perfluoroctanoate	9.54			8.50	"		9.64		1.08	30	
perfluorononanoate	2.64			8.50	"		2.65		0.526	30	
perfluorodecanoate	3.18			8.50	"		3.00		5.69	30	
perfluoroundecanoate	1.33			8.50	"		1.31		1.19	30	
perfluorododecanoate	1.44			8.50	"		1.47		2.28	30	
perfluorotridecanoate	1.40			8.50	"		1.45		3.30	30	
perfluorotetradecanoate	1.91			8.50	"		2.08		8.28	30	
perfluorobutyl sulfonate	10.6			8.50	"		9.46		11.4	30	
perfluorohexyl sulfonate	13.4			8.50	"		13.7		1.83	30	
perfluoroctyl sulfonate	43.4			8.50	"		44.4		2.30	30	
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	1.38			8.50	"		1.37		0.836	30	
perfluoro-1-pentanesulfonate (PFPeS)	4.17			8.50	"		4.28		2.45	30	
1H,1H,2H,2H-perfluoroctane sulfonate (6:2 FTS)	305			8.50	"		316		3.55	30	



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

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Batch B19E007 - *** DEFAULT PREP ***

Duplicate (B19E007-DUP2)		Source: 1905005-01		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluoro-1-heptanesulfonate (PFHpS)	U			8.50	ng/L		U			30	
perfluoro-1-octanesulfonamide (FOSA)	1.85			8.50	"		1.59			15.2	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	4.18			8.50	"		4.62			10.1	30
perfluoro-1-nananesulfonate (PFNS)	1.60			8.50	"		1.63			1.70	30
N-MeFOSAA	U			8.50	"		U			30	
N-EtFOSAA	1.88			8.50	"		1.79			4.88	30
perfluoro-1-decanesulfonate (PFDS)	2.21			8.50	"		2.20			0.122	30
Surrogate: D5-N-EtFOSAA	82.2				"	112.1		73.4%	70-130		
Surrogate: D3-N-MeFOSAA	83.0				"	112.1		74.1%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	75.4	Q			"	108.5		69.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	89.9				"	106.3		84.5%	70-130		
Surrogate: perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:	67.8	Q			"	104.8		64.7%	70-130		
Surrogate: M9PFNA	93.2				"	112.1		83.2%	70-130		
Surrogate: M8PFOSA	93.4				"	112.1		83.3%	70-130		
Surrogate: M8PFOS	93.5				"	107.2		87.1%	70-130		
Surrogate: M8PFOA	96.1				"	112.1		85.8%	70-130		
Surrogate: M7PFUnA	80.7				"	112.1		72.0%	70-130		
Surrogate: M6PFDA	90.6				"	112.1		80.9%	70-130		
Surrogate: M5PPPeA	92.5				"	112.1		82.6%	70-130		
Surrogate: M5PFHxA	95.8				"	112.1		85.5%	70-130		
Surrogate: M4PFHxA	93.7				"	112.1		83.6%	70-130		
Surrogate: M3PFHxS	95.4				"	106.0		90.0%	70-130		
Surrogate: M3PFBS	90.9				"	104.1		87.4%	70-130		
Surrogate: M2PFTreA	2.11	Q			"	112.1		1.88%	70-130		
Surrogate: MPFDoA	61.1	Q			"	112.1		54.5%	70-130		
Surrogate: MPFBa	113				"	112.1		101%	70-130		

MRL Check (B19E007-MRL1)

Prepared & Analyzed: May-06-19

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	51.9			50.0	ng/L	50.00		104%	50-150		



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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
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Batch B19E007 - *** DEFAULT PREP ***

MRL Check (B19E007-MRL1)		Prepared & Analyzed: May-06-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluoropentanoate	52.2			50.0	ng/L	50.00		104%	50-150		
perfluorohexanoate	9.87			10.0	"	10.00		98.7%	50-150		
perfluoroheptanoate	11.4			10.0	"	10.00		114%	50-150		
perfluoroctanoate	11.3			10.0	"	10.00		113%	50-150		
perfluorononanoate	10.6			10.0	"	10.00		106%	50-150		
perfluorodecanoate	11.7			10.0	"	10.00		117%	50-150		
perfluoroundecanoate	10.4			10.0	"	10.00		104%	50-150		
perfluorododecanoate	11.0			10.0	"	10.00		110%	50-150		
perfluorotridecanoate	11.3			10.0	"	10.00		113%	50-150		
perfluorotetradecanoate	11.3			10.0	"	10.00		113%	50-150		
perfluorobutyl sulfonate	11.7			10.0	"	10.00		117%	50-150		
perfluorohexyl sulfonate	9.47			10.0	"	10.00		94.7%	50-150		
perfluoroctyl sulfonate	11.6			10.0	"	10.00		116%	50-150		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	10.2			10.0	"	10.00		102%	50-150		
perfluoro-1-pentanesulfonate (PFPeS)	11.0			10.0	"	10.00		110%	50-150		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	1.99	Q		10.0	"	10.00		19.9%	50-150		
perfluoro-1-heptanesulfonate (PFHpS)	10.0			10.0	"	10.00		100%	50-150		
perfluoro-1-octanesulfonamide (FOSA)	10.9			10.0	"	10.00		109%	50-150		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	11.3			10.0	"	10.00		113%	50-150		
perfluoro-1-nonanesulfonate (PFNS)	10.6			10.0	"	10.00		106%	50-150		
N-MeFOSAA	9.31			10.0	"	10.00		93.1%	50-150		
N-EtFOSAA	11.0			10.0	"	10.00		110%	50-150		
perfluoro-1-decanesulfonate (PFDS)	12.2			10.0	"	10.00		122%	50-150		
Surrogate: D5-N-EtFOSAA	150				"	160.0		93.5%	70-130		
Surrogate: D3-N-MeFOSAA	150				"	160.0		93.9%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	143				"	154.9		92.6%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	136				"	151.8		89.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonateC13(2)-4:	129				"	149.6		86.2%	70-130		



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Batch B19E007 - *** DEFAULT PREP ***

MRL Check (B19E007-MRL1)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit		Spike Level	Source Result	%REC		RPD	
				Units	%REC Limits			RPD	Limit		
Surrogate: M9PFNA	148			ng/L	160.0		92.5%	70-130			
Surrogate: M8PFOSA	150			"	160.0		93.5%	70-130			
Surrogate: M8PFOS	146			"	153.1		95.7%	70-130			
Surrogate: M8PFOA	148			"	160.0		92.2%	70-130			
Surrogate: M7PFUnA	146			"	160.0		91.2%	70-130			
Surrogate: M6PFDA	150			"	160.0		93.6%	70-130			
Surrogate: M5PFPeA	148			"	160.0		92.2%	70-130			
Surrogate: M5PFHxA	153			"	160.0		95.3%	70-130			
Surrogate: M4PFHpA	147			"	160.0		91.8%	70-130			
Surrogate: M3PFHxS	142			"	151.4		94.1%	70-130			
Surrogate: M3PFBs	132			"	148.6		88.5%	70-130			
Surrogate: M2PFTreA	143			"	160.0		89.2%	70-130			
Surrogate: MPFDoA	146			"	160.0		91.3%	70-130			
Surrogate: MPFBA	150			"	160.0		93.6%	70-130			

MRL Check (B19E007-MRL2)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit		Spike Level	Source Result	%REC		RPD	
				Units	%REC Limits			RPD	Limit		
perfluorobutanoate	51.2			50.0	ng/L	50.00		102%	50-150		
perfluoropentanoate	50.9			50.0	"	50.00		102%	50-150		
perfluorohexanoate	9.59			10.0	"	10.00		95.9%	50-150		
perfluoroheptanoate	11.3			10.0	"	10.00		113%	50-150		
perfluoroctanoate	12.3			10.0	"	10.00		123%	50-150		
perfluorononanoate	10.9			10.0	"	10.00		109%	50-150		
perfluorodecanoate	11.5			10.0	"	10.00		115%	50-150		
perfluoroundecanoate	11.2			10.0	"	10.00		112%	50-150		
perfluorododecanoate	11.0			10.0	"	10.00		110%	50-150		
perfluorotridecanoate	11.0			10.0	"	10.00		110%	50-150		
perfluorotetradecanoate	11.5			10.0	"	10.00		115%	50-150		
perfluorobutyl sulfonate	10.9			10.0	"	10.00		109%	50-150		
perfluorohexyl sulfonate	9.48			10.0	"	10.00		94.8%	50-150		
perfluoroctyl sulfonate	10.9			10.0	"	10.00		109%	50-150		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	9.96			10.0	"	10.00		99.6%	50-150		



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10625 Fallstone Road
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Project Number: [none]
Project Manager: Matthew Loesel

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Batch B19E007 - *** DEFAULT PREP ***

MRL Check (B19E007-MRL2)		Prepared: May-06-19 Analyzed: May-07-19									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluoro-1-pentanesulfonate (PFPeS)	11.5			10.0	ng/L	10.00		115%	50-150		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	2.20	Q		10.0	"	10.00		22.0%	50-150		
perfluoro-1-heptanesulfonate (PFHsP)	10.6			10.0	"	10.00		106%	50-150		
perfluoro-1-octanesulfonamide (FOSA)	10.1			10.0	"	10.00		101%	50-150		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	11.6			10.0	"	10.00		116%	50-150		
perfluoro-1-nonanesulfonate (PFNS)	11.4			10.0	"	10.00		114%	50-150		
N-MeFOSAA	11.4			10.0	"	10.00		114%	50-150		
N-EtFOSAA	11.2			10.0	"	10.00		112%	50-150		
perfluoro-1-decanesulfonate (PFDS)	11.2			10.0	"	10.00		112%	50-150		
Surrogate: D5-N-EtFOSAA	141				"	160.0		88.4%	70-130		
Surrogate: D3-N-MeFOSAA	144				"	160.0		89.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	134				"	154.9		86.8%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	130				"	151.8		85.7%	70-130		
Surrogate: perfluoro(1,2-13C2)hexanesulfonate C13(2)-4:	123				"	149.6		82.5%	70-130		
Surrogate: M9PFNA	142				"	160.0		89.0%	70-130		
Surrogate: M8PFOSA	148				"	160.0		92.4%	70-130		
Surrogate: M8PFOS	140				"	153.1		91.6%	70-130		
Surrogate: M8PFOA	142				"	160.0		89.0%	70-130		
Surrogate: M7PFUnA	142				"	160.0		88.4%	70-130		
Surrogate: M6PFDA	141				"	160.0		88.1%	70-130		
Surrogate: M5PFPeA	138				"	160.0		86.3%	70-130		
Surrogate: M5PFHxA	143				"	160.0		89.6%	70-130		
Surrogate: M4PFHxA	140				"	160.0		87.6%	70-130		
Surrogate: M3PFHxS	134				"	151.4		88.7%	70-130		
Surrogate: M3PFBs	134				"	148.6		90.1%	70-130		
Surrogate: M2PFTreA	139				"	160.0		86.6%	70-130		
Surrogate: MPFDoA	140				"	160.0		87.5%	70-130		
Surrogate: MPFBA	140				"	160.0		87.4%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

Matrix Spike (B19E007-MS1)	Source: 1905003-02		Prepared: May-06-19 Analyzed: May-07-19								
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	650			44.4	ng/L	620.5	17.8	102%	70-130		
perfluoropentanoate	576			44.4	"	620.5	47.3	85.3%	70-130		
perfluorohexanoate	145			8.88	"	124.1	35.2	88.4%	70-130		
perfluoroheptanoate	127			8.88	"	124.1	14.3	90.7%	70-130		
perfluoroctanoate	121			8.88	"	124.1	11.6	88.1%	70-130		
perfluorononanoate	114			8.88	"	124.1	3.18	89.6%	70-130		
perfluorodecanoate	109			8.88	"	124.1	2.99	85.2%	70-130		
perfluoroundecanoate	104			8.88	"	124.1	1.59	82.7%	70-130		
perfluorododecanoate	90.7			8.88	"	124.1	1.82	71.7%	70-130		
perfluorotridecanoate	67.1	Q		8.88	"	124.1	1.47	52.8%	70-130		
perfluorotetradecanoate	19.4	Q		8.88	"	124.1	2.18	13.9%	70-130		
perfluorobutyl sulfonate	123			8.88	"	124.1	12.0	89.1%	70-130		
perfluorohexyl sulfonate	135			8.88	"	124.1	13.4	98.3%	70-130		
perfluoroctyl sulfonate	152			8.88	"	124.1	41.9	88.8%	70-130		
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	97.4			8.88	"	124.1	1.65	77.2%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	116			8.88	"	124.1	4.32	89.9%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	378	Q		8.88	"	124.1	326	42.0%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	115			8.88	"	124.1	U	92.6%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	111			8.88	"	124.1	1.83	87.9%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	102			8.88	"	124.1	5.12	78.3%	70-130		
perfluoro-1-nananesulfonate (PFNS)	107			8.88	"	124.1	1.59	85.2%	70-130		
N-MeFOSAA	101			8.88	"	124.1	U	81.2%	70-130		
N-EtFOSAA	99.4			8.88	"	124.1	1.71	78.7%	70-130		
perfluoro-1-decanesulfonate (PFDS)	93.2			8.88	"	124.1	2.16	73.4%	70-130		
Surrogate: D5-N-EtFOSAA	91.5				"	124.1		73.7%	70-130		
Surrogate: D3-N-MeFOSAA	92.4				"	124.1		74.5%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTS	88.2				"	120.1		73.4%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTS	101				"	117.8		86.0%	70-130		



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

Matrix Spike (B19E007-MS1)		Source: 1905003-02		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate:	82.7				ng/L	116.0		71.3%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	124.1		82.1%	70-130		
Surrogate: M9PFNA	102				"	124.1		81.9%	70-130		
Surrogate: M8PFOSA	102				"	124.1		82.2%	70-130		
Surrogate: M8PFOS	97.6				"	118.8		82.5%	70-130		
Surrogate: M8PFOA	102				"	124.1		82.5%	70-130		
Surrogate: M7PFUnA	92.2				"	124.1		74.3%	70-130		
Surrogate: M6PFDA	97.3				"	124.1		78.4%	70-130		
Surrogate: M5PFPeA	99.5				"	124.1		80.2%	70-130		
Surrogate: M5PFHxA	104				"	124.1		83.5%	70-130		
Surrogate: M4PFHpA	102				"	124.1		82.3%	70-130		
Surrogate: M3PFHxS	100				"	117.4		85.5%	70-130		
Surrogate: M3PFBS	93.9				"	115.3		81.5%	70-130		
Surrogate: M2PFTreA	18.2	Q			"	124.1		14.7%	70-130		
Surrogate: MPFDaA	82.4	Q			"	124.1		66.4%	70-130		
Surrogate: MPFBA	113				"	124.1		90.9%	70-130		

Matrix Spike (B19E007-MS2)		Source: 1905005-01		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	579			42.4	ng/L	556.0	17.5	101%	70-130		
perfluoropentanoate	505			42.4	"	556.0	44.0	82.9%	70-130		
perfluorohexanoate	132			8.47	"	111.2	34.2	88.4%	70-130		
perfluoroheptanoate	115			8.47	"	111.2	16.0	89.0%	70-130		
perfluoroctanoate	109			8.47	"	111.2	9.64	89.1%	70-130		
perfluorononanoate	102			8.47	"	111.2	2.65	89.2%	70-130		
perfluorodecanoate	98.5			8.47	"	111.2	3.00	85.8%	70-130		
perfluoroundecanoate	91.6			8.47	"	111.2	1.31	81.2%	70-130		
perfluorododecanoate	73.3	Q		8.47	"	111.2	1.47	64.6%	70-130		
perfluorotridecanoate	43.2	Q		8.47	"	111.2	1.45	37.5%	70-130		
perfluorotetradecanoate	5.46	Q		8.47	"	111.2	2.08	3.04%	70-130		
perfluorobutyl sulfonate	111			8.47	"	111.2	9.46	91.6%	70-130		
perfluorohexyl sulfonate	120			8.47	"	111.2	13.7	95.7%	70-130		
perfluoroctyl sulfonate	145			8.47	"	111.2	44.4	90.5%	70-130		



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536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

Matrix Spike (B19E007-MS2)		Source: 1905005-01		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	83.2			8.47	ng/L	111.2	1.37	73.6%	70-130		
perfluoro-1-pentanesulfonate (PFPeS)	105			8.47	"	111.2	4.28	90.9%	70-130		
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	395			8.47	"	111.2	316	71.2%	70-130		
perfluoro-1-heptanesulfonate (PFHpS)	104			8.47	"	111.2	U	93.1%	70-130		
perfluoro-1-octanesulfonamide (FOSA)	98.9			8.47	"	111.2	1.59	87.5%	70-130		
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	90.3			8.47	"	111.2	4.62	77.1%	70-130		
perfluoro-1-nonanesulfonate (PFNS)	90.9			8.47	"	111.2	1.63	80.3%	70-130		
N-MeFOSAA	90.4			8.47	"	111.2	U	81.3%	70-130		
N-EtFOSAA	86.6			8.47	"	111.2	1.79	76.3%	70-130		
perfluoro-1-decanesulfonate (PFDS)	73.0	Q		8.47	"	111.2	2.20	63.6%	70-130		
Surrogate: D5-N-EtFOSAA	84.9				"	111.2		76.3%	70-130		
Surrogate: D3-N-MeFOSAA	82.6				"	111.2		74.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	79.6				"	107.6		74.0%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	95.1				"	105.5		90.1%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonateC13(2)-4:	73.8				"	104.0		71.0%	70-130		
Surrogate: M9PFNA	95.2				"	111.2		85.7%	70-130		
Surrogate: M8PFOSA	96.2				"	111.2		86.5%	70-130		
Surrogate: M8PFOS	94.7				"	106.4		89.0%	70-130		
Surrogate: M8PFOA	91.7				"	111.2		82.4%	70-130		
Surrogate: M7PFUnA	84.9				"	111.2		76.4%	70-130		
Surrogate: M6PFDA	92.6				"	111.2		83.2%	70-130		
Surrogate: M5PFPeA	91.2				"	111.2		82.0%	70-130		
Surrogate: M5PFHxA	93.1				"	111.2		83.8%	70-130		
Surrogate: M4PFHpA	95.6				"	111.2		86.0%	70-130		
Surrogate: M3PFHxS	97.5				"	105.2		92.7%	70-130		
Surrogate: M3PFBs	90.6				"	103.3		87.7%	70-130		
Surrogate: M2PFTreA	5.48	Q			"	111.2		4.93%	70-130		
Surrogate: MPFDaA	70.8	Q			"	111.2		63.7%	70-130		
Surrogate: MPFBA	110				"	111.2		98.6%	70-130		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - * DEFAULT PREP *****

Matrix Spike Dup (B19E007-MSD1)		Source: 1905003-02		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	590			41.6	ng/L	532.5	17.8	107%	70-130	9.58	30
perfluoropentanoate	526			41.6	"	532.5	47.3	90.0%	70-130	9.10	30
perfluorohexanoate	135			8.33	"	106.5	35.2	94.1%	70-130	6.79	30
perfluoroheptanoate	113			8.33	"	106.5	14.3	92.6%	70-130	11.6	30
perfluoroctanoate	110			8.33	"	106.5	11.6	92.6%	70-130	9.26	30
perfluorononanoate	104			8.33	"	106.5	3.18	95.1%	70-130	9.09	30
perfluorodecanoate	97.9			8.33	"	106.5	2.99	89.1%	70-130	10.4	30
perfluoroundecanoate	86.3			8.33	"	106.5	1.59	79.5%	70-130	18.9	30
perfluorododecanoate	65.7	Q		8.33	"	106.5	1.82	60.0%	70-130	32.0	30
perfluorotridecanoate	24.2	Q		8.33	"	106.5	1.47	21.4%	70-130	93.8	30
perfluorotetradecanoate	2.13	Q		8.33	"	106.5	2.18	NR	70-130	161	30
perfluorobutyl sulfonate	119			8.33	"	106.5	12.0	101%	70-130	2.66	30
perfluorohexyl sulfonate	125			8.33	"	106.5	13.4	105%	70-130	7.79	30
perfluoroctyl sulfonate	139			8.33	"	106.5	41.9	91.4%	70-130	8.88	30
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTs)	83.6			8.33	"	106.5	1.65	76.9%	70-130	15.3	30
perfluoro-1-pentanesulfonate (PFPeS)	99.3			8.33	"	106.5	4.32	89.2%	70-130	15.4	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTs)	381	Q		8.33	"	106.5	326	51.6%	70-130	0.737	30
perfluoro-1-heptanesulfonate (PFHpS)	103			8.33	"	106.5	U	96.3%	70-130	11.3	30
perfluoro-1-octanesulfonamide (FOSA)	92.1			8.33	"	106.5	1.83	84.8%	70-130	18.5	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTs)	95.7			8.33	"	106.5	5.12	85.1%	70-130	6.64	30
perfluoro-1-nonanesulfonate (PFNS)	84.1			8.33	"	106.5	1.59	77.4%	70-130	24.3	30
N-MeFOSAA	86.2			8.33	"	106.5	U	80.9%	70-130	15.6	30
N-EtFOSAA	81.2			8.33	"	106.5	1.71	74.6%	70-130	20.1	30
perfluoro-1-decanesulfonate (PFDS)	57.3	Q		8.33	"	106.5	2.16	51.8%	70-130	47.7	30
Surrogate: D5-N-EtFOSAA	84.5				"	106.5		79.4%	70-130		
Surrogate: D3-N-MeFOSAA	84.1				"	106.5		79.0%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonate C13(2)-8:2 FTs	86.9				"	103.1		84.3%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonate C13(2)-6:2 FTs	101				"	101.1		100%	70-130		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
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Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

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Analysis by LC MS MS - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - * DEFAULT PREP *****

Matrix Spike Dup (B19E007-MSD1)		Source: 1905003-02		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate:	77.3				ng/L	99.58		77.6%	70-130		
perfluoro(1,2-13C2)hexanesulfonateC13(2)-4:					"	106.5		90.0%	70-130		
Surrogate: M9PFNA	95.9				"	106.5		89.0%	70-130		
Surrogate: M8PFOSA	94.8				"	106.5		90.7%	70-130		
Surrogate: M8PFOS	92.4				"	101.9		90.8%	70-130		
Surrogate: M8PFOA	96.7				"	106.5		87.9%	70-130		
Surrogate: M7PFUnA	80.6				"	106.5		92.7%	70-130		
Surrogate: M6PFDA	93.6				"	106.5		91.5%	70-130		
Surrogate: M5PFPeA	96.9				"	106.5		91.0%	70-130		
Surrogate: M5PFHxA	98.7				"	106.5		90.0%	70-130		
Surrogate: M4PFHpA	95.6				"	106.5		90.7%	70-130		
Surrogate: M3PFHxS	96.9				"	100.8		96.2%	70-130		
Surrogate: M3PFBS	90.5				"	98.95		91.5%	70-130		
Surrogate: M2PFTreA	2.26	Q			"	106.5		2.12%	70-130		
Surrogate: MPFDaA	60.4	Q			"	106.5		56.7%	70-130		
Surrogate: MPFBA	113				"	106.5		106%	70-130		

Matrix Spike Dup (B19E007-MSD2)		Source: 1905005-01		Prepared: May-06-19		Analyzed: May-07-19					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
perfluorobutanoate	592			42.9	ng/L	572.4	17.5	100%	70-130	2.12	30
perfluoropentanoate	517			42.9	"	572.4	44.0	82.6%	70-130	2.30	30
perfluorohexanoate	132			8.58	"	114.5	34.2	85.4%	70-130	0.343	30
perfluoroheptanoate	113			8.58	"	114.5	16.0	85.2%	70-130	1.27	30
perfluoroctanoate	109			8.58	"	114.5	9.64	86.8%	70-130	0.244	30
perfluorononanoate	107			8.58	"	114.5	2.65	91.0%	70-130	4.71	30
perfluorodecanoate	99.7			8.58	"	114.5	3.00	84.5%	70-130	1.25	30
perfluoroundecanoate	91.7			8.58	"	114.5	1.31	79.0%	70-130	0.160	30
perfluorododecanoate	80.0	Q		8.58	"	114.5	1.47	68.6%	70-130	8.69	30
perfluorotridecanoate	41.1	Q		8.58	"	114.5	1.45	34.7%	70-130	4.85	30
perfluorotetradecanoate	4.12	Q		8.58	"	114.5	2.08	1.78%	70-130	28.0	30
perfluorobutyl sulfonate	117			8.58	"	114.5	9.46	94.3%	70-130	5.30	30
perfluorohexyl sulfonate	118			8.58	"	114.5	13.7	91.5%	70-130	1.38	30
perfluoroctyl sulfonate	146			8.58	"	114.5	44.4	88.9%	70-130	0.728	30



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Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
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Project Manager: Matthew Loesel

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Analysis by LC MS MS - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B19E007 - *** DEFAULT PREP ***

Matrix Spike Dup (B19E007-MSD2)		Source: 1905005-01		Prepared: May-06-19 Analyzed: May-07-19							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorohexane sulfonate (4:2 FTS)	88.1			8.58	ng/L	114.5	1.37	75.8%	70-130	5.78	30
perfluoro-1-pentanesulfonate (PFPeS)	109			8.58	"	114.5	4.28	91.3%	70-130	3.15	30
1H,1H,2H,2H-perfluorooctane sulfonate (6:2 FTS)	394	Q		8.58	"	114.5	316	67.6%	70-130	0.462	30
perfluoro-1-heptanesulfonate (PFHpS)	111			8.58	"	114.5	U	96.8%	70-130	6.83	30
perfluoro-1-octanesulfonamide (FOSA)	105			8.58	"	114.5	1.59	90.1%	70-130	5.80	30
1H,1H,2H,2H-perfluorodecane sulfonate (8:2 FTS)	94.3			8.58	"	114.5	4.62	78.4%	70-130	4.38	30
perfluoro-1-nonanesulfonate (PFNS)	97.3			8.58	"	114.5	1.63	83.5%	70-130	6.74	30
N-MeFOSAA	96.9			8.58	"	114.5	U	84.7%	70-130	6.91	30
N-EtFOSAA	89.4			8.58	"	114.5	1.79	76.6%	70-130	3.22	30
perfluoro-1-decanesulfonate (PFDS)	75.9	Q		8.58	"	114.5	2.20	64.4%	70-130	3.94	30
Surrogate: D5-N-EtFOSAA	84.6				"	114.5		73.9%	70-130		
Surrogate: D3-N-MeFOSAA	86.7				"	114.5		75.7%	70-130		
Surrogate: perfluoro-(1,2-13C2)decanesulfonateC13(2)-8:2 FTS	82.6				"	110.8		74.6%	70-130		
Surrogate: perfluoro-(1,2-13C2)octanesulfonateC13(2)-6:2 FTS	96.8				"	108.6		89.1%	70-130		
Surrogate: perfluoro-(1,2-13C2)hexanesulfonateC13(2)-4:	76.1				"	107.0		71.1%	70-130		
Surrogate: M9PFNA	97.7				"	114.5		85.3%	70-130		
Surrogate: M8PFOSA	99.7				"	114.5		87.1%	70-130		
Surrogate: M8PFOS	95.7				"	109.5		87.3%	70-130		
Surrogate: M8PFOA	94.1				"	114.5		82.2%	70-130		
Surrogate: M7PFUnA	87.7				"	114.5		76.6%	70-130		
Surrogate: M6PFDA	93.7				"	114.5		81.8%	70-130		
Surrogate: M5PFPeA	93.8				"	114.5		81.9%	70-130		
Surrogate: M5PFHxA	94.6				"	114.5		82.6%	70-130		
Surrogate: M4PFHpA	95.3				"	114.5		83.3%	70-130		
Surrogate: M3PFHxS	97.8				"	108.3		90.3%	70-130		
Surrogate: M3PFBs	92.1				"	106.3		86.6%	70-130		
Surrogate: M2PFTreA	4.44	Q			"	114.5		3.88%	70-130		
Surrogate: MPFDaA	72.6	Q			"	114.5		63.4%	70-130		
Surrogate: MPFBA	112				"	114.5		97.7%	70-130		



Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Region 6, US EPA
10625 Fallstone Road
Houston TX, 77099

Project: R06 Deer Park PFAS
Project Number: [none]
Project Manager: Matthew Loesel

Reported:
May-07-19 16:15

Analysis by LC MS MS - Quality Control

US EPA Region 5 Chicago Regional Laboratory

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Notes and Definitions

U Not Detected
NR Not Reported
Q QC limit Exceeded